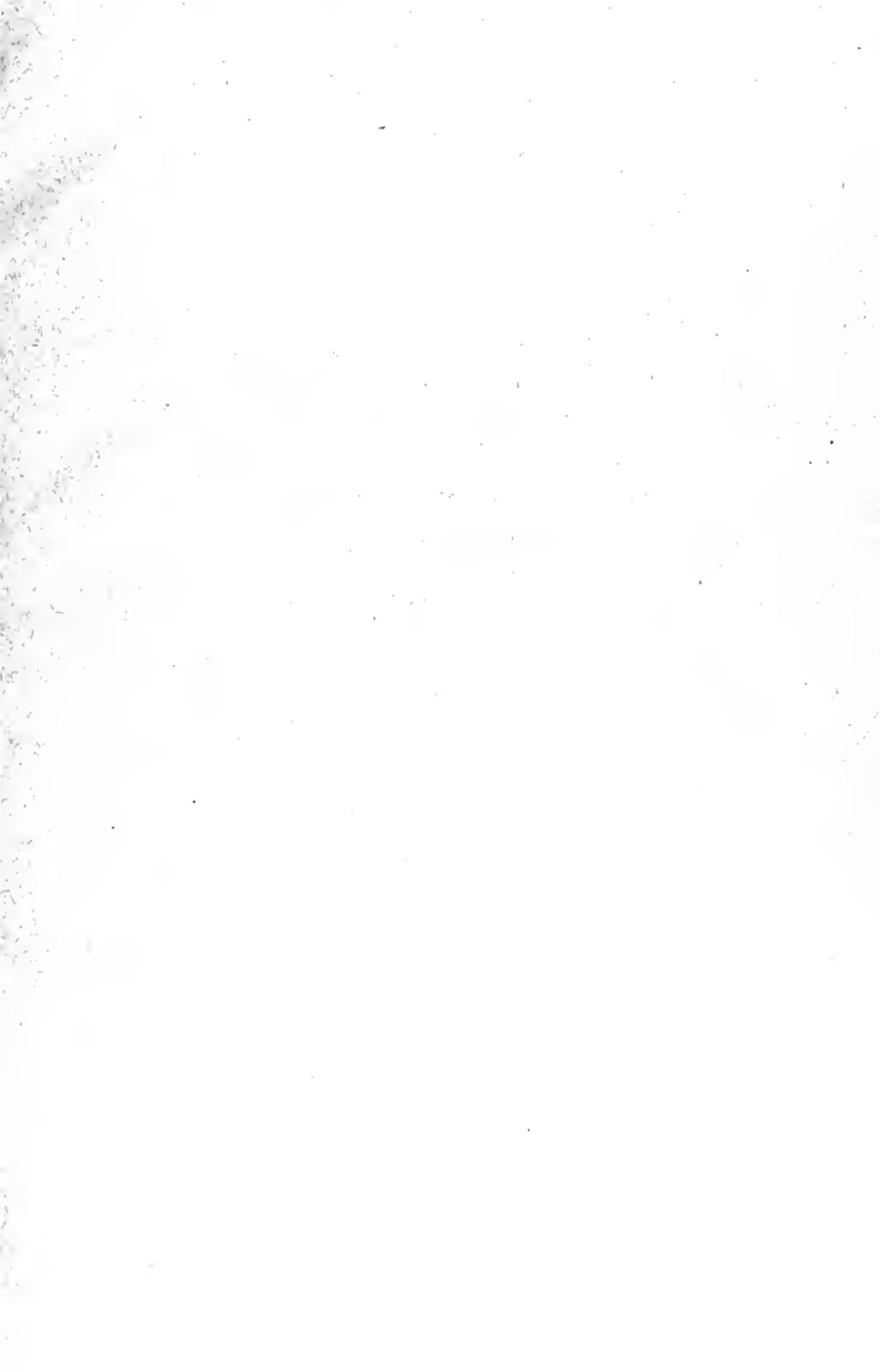


FOR THE PEOPLE
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THE OÖLOGIST,
FOR THE
STUDENT OF BIRDS,
THEIR NESTS AND EGGS.

VOLUME X.

ALBION, N. Y.
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INDEX TO VOL. X.

- Advise Wanted.....30, 72, 106
Æpyornis. An Egg of236
Albatross. At Long Beach, California. An ... 88
Albatross. Sooty88
Albinoes.....57
Anhinga148
Auld Lang Syne275

Baldamus, August Karl Edward.....332
Balliet, Letson.....58
Birds As Pets22, 199
Bird Nesting in an Illinois Swamp21
Birds. Hints on Skinning and Mounting.....86
Birds of Henry County, Iowa, Notes on the 325
Birds, Queer Myths About112
Bird's Skin. How to Prepare a80, 225
Bird Wit and the Lack of It283
Bittern, American.....43, 75, 83, 247
Bittern, Croaking of the153
Bittern, Least22, 24, 43, 76, 249
Bitterns, Among the Least210
Bitterns in Henry Co., Illinois. The American and Least.....217
Blackbird, A Tricolored.....115
Blackbird, Bicolored.....116
Blackbird Red-winged.....116
Blackbird, Yellow-headed.....114
Black List58
Bluebird.....48
Bluebird, Mountain301
Bluebird, Western301
Boat Suitable for Collectors...251
Bob-white.....307
Bob-white, Florida.....117
Bog Bull.....83
Bog Trotter.....83
Bunting, Black-throated234
Bunting, Indigo29
Bunting, Lazuli.....119
Butcher Bird79
Buzzard, European272
Buzzard, Red-shouldered273
Buzzard, Red-tailed102, 139
Buzzard, Turkey.....89, 255

California, Another Day with the Birds of Southern77
California, Bluebirds of301
California, The White-tailed Kite and Prairie Falcon in.....258
California Trip. Another.....116

Camping, A Few Hints on.....140
Canadian Birds.....146
Canvas-back, A Nest of the320
Cardinal.....21, 28, 276
Catbird.....46
Cathartes aura. Notes on.....82
Chat and Cliff Swallow71
Chat, Yellow-breasted.....45, 71
Chewink.....51
Chicago, Collecting in42
Chickadee, A Friendly.....152
Chickadee, Carolina.....47
Chickadee, Oregon.....204, 283
Chicken-hawk273
Climbing, A Few Hints about332
Clothing, Collectors.....19
Collecting at Night—Poetry317
Coot, American.....31
Cowbird26, 71, 110, 198, 325, 326
Cowbirds Eggs.....31
Cowbird Egg. The History of a230
Crane.....73
Crane, Sandhill.....57, 234
Creeper, Brown.....47
Creeper, Nesting of the Brown260
Criticism, A107, 154
Criticism, Not a319
Crow, American.....202
Crow, A Trick of the81
Crow, Florida177
Cruising and Science219, 285
Cuckoo, Black-billed.....235
Cuckoo, Yellow-billed.....58, 276, 326

Dab-chick.....226
Data Blanks.....182
Day, A Lucky.....51
Day in the Woods, A282
Die-dapper.....226
Dipper, American57, 117, 283
Dove, Mourning157
Duck, Black.....302
Duck, Gray135

Eagle, Bald39, 140, 295
Eagle, Bald-headed.....39
Eagle, Golden110, 295
Eagle, White-headed295
Egg, A Mammoth236
Eggs, How to Blow235

THE OÖLOGIST.

Eggs, Leaving Nest	254
Eggs, Prepare More Carefully	153
Eggs, Runt	231
Eggs, to Dry When Brown	154
Egret, American	74, 151
Egret, Greater	71
Egret, Lesser	71
Embryology of a Bird, The	178
Errata	57
Escape, A Narrow	255
Exchanges, Instructions for	138
Exchanging, Courtesy and Business in	136
 Falcon, Prairie	140, 260
Falcon, Taking the Eggs of the Peregrine	169
Finch, Lark	41
Finch, Texas Seaside	301
Flat-head	79
Flicker	256, 281, 331
Flicker, Gilded	30
Flicker, Red-shafted	78, 251, 283
Flicker, Yellow-shafted	331
Florida and Other Notes, The Osprey in	23
Florida, The Loggerhead Shrike of	79
Floridian Races	176
Flycatcher, Notes on the Nesting Habits of the Scissortailed	221
Flycatcher, Trail's	235
Flycatcher, Western	79, 117
Fly-up-the-creek	74
 Gallinule, Florida	21, 21, 43
Gallinule, Purple	24
Game Bird of the Prairie, The	303
Geese, Remarkable Flight of	171
Gnatcatcher, Blue-gray	47, 325
Goldfinch, American	254, 300, 326
Goldfinch, Arkansas	22, 106, 118, 204
Goldfinch, Green backed	22
Goldfinch, Lawrence's	118
Goshawk, American	139
Goshawk in Illinois, At present	54, 107
Gross, Death of Benjamin F.	281
Grebe, Carolina	226
Grebe, Pribilof	23, 226, 302
Grebe, at Home, The Rose breasted	253
Grebe, Black headed	118
Grebe, Leaping	25
Grebe, Migrates How Far South Has the Evening	91
Grebe, Rose breasted	307
Grackle, Oregon visited	203
Grebe, Rufous	225
Grebe, The Sooty	18, 254
Gull, American Herring	111
Gull, Greville's	114
Gull, Ring-billed	114
Gull, Common	17, 105
Gyrfalcon	101
 Hades Plover, Nesting Habits of the	226
Harriman	138
Hash	231
Hawk, American Rough-legged	200
Hawk, American Sparrow	101, 140
Hawk and Its Eggs, The Marsh	27
Hawk, Broad-winged	140, 272
Hawk, Cooper's	138, 325
Hawk, Duck	101, 140, 169
Hawk, Fish	23, 39, 53
Hawk, Krider's	139
Hawk, Marsh	25, 138
Hawk, Mouse	138
Hawk, Pigeon	101
Hawk, Red-shouldered	104, 139, 273, 325
Hawk, Red-tailed	57, 102, 139, 201, 325
Hawk, Sharp-shinned	138, 300
Hawk, Swainson's	139, 272
Hawk, Unusual Nesting of the Sparrow	306
Hawks, The Sagacity of Fish	53
Hell Diver	226
Hen-hawk	273
Heron, Black-crowned Night	22, 75, 203, 302
Heron, Great Blue	22, 73, 77, 103, 302
Heron, Green	74, 302
Heron, Little Blue	151
Heron, Louisiana	151
Heron, Snowy	74
Heron, White	74, 151
Herons of Michigan	73
Herony, A	202
"Hooter"	140
Hummingbird, Anna's	118, 157, 223
Hummingbird, Black-chinned	118, 184
Hummingbird, Costa's	184, 224
Hummingbird, Rufous	78
Hummingbirds, A Flock of	183
Hummingbirds Nests, Twice Used	183, 223
 Illinois River Valley, From an Ornithological Standpoint	119
Illinois Swamp, Bird Nesting in an	21
Illinois, The American and Least Bittern in Henry Co.	247
Illinois, The Whip-poor-will in Stark Co.	307
Indian Hen	75, 83
Information Wanted, In Relation to the Nest and Eggs of a List of Rare Species	92
Iowa, Great Horned Owl in	87
Iowa, Notes on the Birds of Henry Co.	325
Jay, Blue	383
Jay, Blue-fronted	282
Jay, Florida Blue	177
Jay in Colorado, The Long-crested	232
Jay, Oregon	283
Jay Steller's	282
Junco, Oregon	204
Junco, Slate-colored	57
 Kestrel	275
Killdeer	308
Kingfisher, Belted	303
Kite, Mississippi	101
Kite, Swallow-tailed	138
Kite, White-tailed	258
 Lark, Prairie Horned	143, 236, 326
Lark, Varieties of the Horned	56

THE OÖLOGIST.

Lattin & Co., F. H.....	153	"Our Birds in Their Haunts".....	31
Lattin & Co., F. H., Plans for 1893.....	153	Outfit, A Field Naturalist's.....	17
Loads (Gun) for Collectors.....	18	Outfit, Camping and Collecting.....	18
Loggerhead.....	75	Outfit, Taxidermist's.....	18
Loon's Eggs, A Trip for.....	171	Ouzel, Water.....	117
Loons Eggs, Something More about.....	229	Oven-bird.....	45
Magpie, The American.....	211	Oven-birds Nest Building.....	307
Maine, Notes from.....	306	Owl, Acadian.....	205, 330
Maryland, Some Shore Birds of Baltimore County.....	302	Owl, A Captive Screech.....	331
Mangrove Trees.....	149	Owl, American Barn, 53, 108, 140, 154, 296, 319, 329	
Martin, Cuban.....	24	Owl, Barred.....	52, 81, 140, 201, 230, 328
Martin, Purple.....	29	Owl, Burrowing.....	140, 234
Meadowlark.....	24	Owl, Cat.....	140
Merlin, Richardson's.....	101	Owl, Elf.....	30
Michigan, Notes from Isabella Co.....	24	Owl, Florida Barred.....	177
Michigan, Raptore of.....	101, 272, 294, 327	Owl, Florida Screech.....	177
Michigan, The Birds of.....	229	Owl, Great Gray.....	329
Michigan, The Herons of.....	73	Owl, Great Horned.....	53, 87, 140, 201
Migration.....	298, 333	Owl, Hoot.....	140
Minnesota, Some Sparrows in.....	41	Owl, Large Set of Burrowing.....	204
Moccasin, Bite of a Water.....	149	Owl, Long-eared.....	140, 296
Mockingbird.....	46	Owl, Marsh.....	140
Mockingbird, False.....	79	Owl, Pigmy.....	330
Mss. Desirable.....	58, 59	Owl, Richardson's.....	330
Naturalist's Association, Western New York.....	362, 332	Owl, Saw-whet.....	25, 53, 205, 370
Naturalist's Outfit, A Field.....	17, 105, 109	Owl, Screech.....	52, 140
Nehrling's "North American Birds".....	154	Owl, Short-eared.....	140, 327
Nesting, Early.....	157	Owl, Sparrow.....	330
Nest (Plum) Full, A.....	300	Owl, Spotted.....	236
Nesting, Rare.....	205	Owl, Wood.....	329
Nesting Site, A Peculiar.....	331	Owls, Winter Collecting or Something about.....	52
New York City, The Birds Which Breed in Central Park.....	26	Paradise Bird.....	224
New York City, The Winter Visitors of Central Park.....	77	Park, Death of Austin F.....	332
New Zealand, Habits of the California Quail in.....	135	Partridge, California.....	254
Nighthawk.....	176	Partridge, Mountain.....	282
Nighthawk's Nest, The.....	254	Partridge, Red-legged.....	276
Nomenclature, Trinomial.....	155	Partridge, The Plumed.....	232
North Carolina Birds Eggs, A Collection of.....	28	Pertinacious Pernicious (S) Parrow.....	122
Nuthatch, Brown-headed.....	47	Pewee, Western Wood.....	184
Nuthatch, White-breasted.....	47	Phalarope, Wilson's.....	43
Obituary.....	281, 332	Pheasant, Mongolian.....	203
OOLOGIST, A Poem to the.....	59	Pheasant, Ring.....	283
OOLOGIST's, The HAND-BOOK.....	59	Phoebe, A Peculiar Nesting Freak of the.....	182
Ooologist, The, Its Popularity.....	57	Phoebe, Black.....	117
Ooologist, The, Contents of 91 Back Numbers.....	185	Pigeon, Band-tailed.....	113
Oology.....	318	Pintail Duck, The.....	204
Orange and Black, A Study in.....	197	Plover, Field.....	236
Oregon Item, An.....	154	Plover, Nesting of the Mountain.....	230
Oregon, Notes from Yamhill Co.....	203	Plover, Semipalmated.....	303
Oriole, Baltimore.....	284, 331	Plumage.....	141
Oriole, Bullock's.....	119	Plum Puddin.....	75, 83
Oriole, Orchard.....	331	Postal Card Articles.....	89
Ornithological Club, The Cooper.....	230	Prairie Hen.....	303
Ornithologist's Association.....	23	PRIZE CONTESTS, November (92).....	23
Osprey, American.....	23, 39, 53, 140, 303	December (92).....	59
Osprey in Florida and Other Notes.....	23	January.....	90
Osteology for Amateurs, Scientific.....	41, 182	February.....	121
		March.....	152
		April.....	184
		May.....	212
		June.....	237
		July.....	261

THE OÖLOGIST.

Prize Contests, August	285
September	309
October	309
November	333
Problem, A	370
Quail	375
Quail in New Zealand; On the Habits of the California	135
Quail, New Zealand	136
Rail in California, Virginia	121
Rail, King	21, 43, 57
Rail, Sora	305
Rail, Virginia	154, 306
Rail, Water	306
Rails, Sora and Virginia	305
Ramble, A Summer	10
Raptores of Michigan	101, 272, 294, 327
Raptores of Omaha and Vicinity	138
Raven, American	200, 306
"Red Nose"	21
Redstart, American	197
Red-tail, Western	78, 117, 139
Robin, American	48
Round-head	329
Sandpiper, Bortmanni	235, 303
Sandpiper, Least	302
Sandpiper, Semipalmated	302
Sandpiper, Solitary	303
Sandpiper, Spotted	303
Sapsucker, The	256
Sapsucker, Yellow-bellied	256
Scheme, A New	89
Scheme, Another	90, 154
Scissor-tail	224
Sets, How to List	235
Shore Birds of Lake Roland and Loch Raven, Baltimore Co., Maryland	302
Shrike of Florida, The Loggerhead	79
Shy-toe-poke	71
Siskin, Pine	22, 307
Skeleton, To Prepare a	44, 182
Snake Birds, Among the	118
Studies in Florida Poisons	150
Snowbird, Black	57
Snowbird, Oregon	204
Sparrow, Clay-colored	42
Sparrow, Field	28
Sparrow Fox	42
Sparrow, Harris's	41
Sparrow, Heermann's Song	78, 116
Sparrow, Lark	41
Sparrow, Leconte's	41
Sparrow, Song	26, 108
Sparrow, Swamp	42, 108
Sparrow, Texan Seaside	301
Sparrow, Varieties of Song	56
Sparrow, White-crowned	41
Sparrow, White-throated	41
Sparrows in Minnesota, Some	41
Sparrow Hawk	226
Stage Driver	21
Stake Driver	76, 83
Swallow, Bank	106
Swallow, Cliff	72, 184
Swallow, Rough-winged	29
Swallow, The Rough-winged	106
Swallow, Violet-green	22
Swift, The Chimney	208, 284
Tanager, Louisiana	184
Tanager, Scarlet	29, 52, 307, 330
Tanager, Summer	29, 330
Taxidermy "Davy's Methods in the Art of"	58
Tern, Black	44, 231
Tern, Caspian or Imperial	114
Tern, Least	302
Texas, Nesting Habits of the Baird's and Carolina Wrens in Travis Co.	280
Thrasher, Brown	46
Thrush, Hermit	25
Thrush, Russet-backed	204
Thrush, Song	52
Thrush, Wilson's	48
Thrush, Wood	48, 52, 107, 154, 326
Thunder, Pumper	75, 83
Titmouse, Tufted	47
Towhee	28, 51, 325
Towhee, California	78
Towhee, Oregon	203
Towhee, Spurred	79
Towhee, White-eyed	177
Tribulations of the Oologist—Poetry	122
Turkey, Some Notes on the Wild	293
Turkey, Water	148
Vireo, Mountain Solitary	29
Vireo, Red-eyed	30
Vireo, Warbling	119, 184
Vireo, White-eyed	30
Vireo, Yellow-throated	29
Vulture, California	49
Vulture Eggs, Collecting Black	55
Vulture, Turkey	82, 255
Warbler, Black and White	51
Warbler, Black-throated Green	52
Warbler, Blue-winged	326
Warbler, Blue Yellow-backed	51
Warbler, Canadian	51
Warbler, Golden-winged	183
Warbler, Hooded	46
Warbler, Nesting of the Blue-winged Yellow	110
Warbler, Parula	27, 51
Warbler, Pine	30
Warbler, Prairie	26, 28, 45
Warbler, Prothonotary	19, 119
Warbler, The Golden Swamp	19
Warbler, With the Prairie	297
Warbler, Worm-eating	30, 325
Warbler, Yellow Palm	54
Warbler, Yellow-throated	30
Warbler's Two	27
Water-Thrush, Louisiana	25, 45
Webb, Walter F., in Partnership with "Lat-tin"	153
Whip-poor-will	51, 176
Whip-poor-will in Stark Co., Illinois, The	307

THE OÖLOGIST.

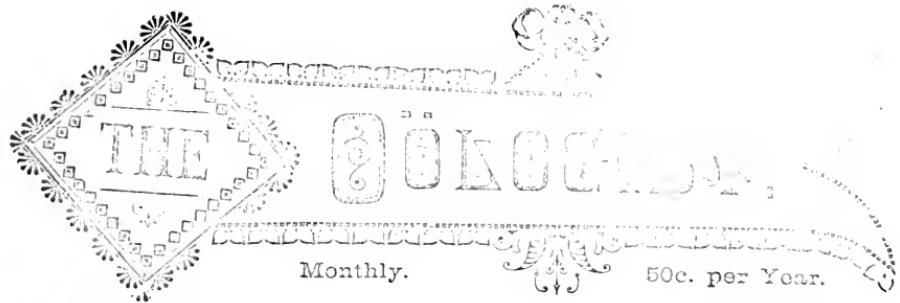
WILSON, SCENES FROM THE LIFE OF ALEXANDER

His Early American Career	147
His Southern Subscription Tour.....	321
Journey to the Falls of Niagara	221
The First Volume of the American Ornithology	269
The Planning of his American Ornithology.....	206
The Progress of His Undertaking	245
Wilson and Bartram the Naturalist	175
Wilson in Scotland	110
Woodcock, Peculiar Habit of the.....	232
Woodcock, The American.....	278
Woodpecker, American Three-toed	256
Woodpecker, Arct'c. Three-toed	256
Woodpecker, Black	256
Woodpecker, Californian.....	79
Woodpecker, Downy.....	151, 256
Woodpecker, Gairdner's	79
Woodpecker, Gila	30
Woodpecker, Golden-winged.....	284
Woodpecker, Hairy.....	25, 256
Woodpecker, Ivory-billed.....	324
Woodpecker, Pileated	21, 256
Woodpecker, Red-headed	256
Woodpecker, Southern Hairy.....	177

WORLD'S FAIR NOTES.

California Redwood Tree	16
Columbian Half Dollars	16
Eggs Collected on World's Fair Grounds	153
Jottings and Advice from Our Special Correspondent	179
Latin's Exhibit	89
Mineral Cabin	16
Natural History Notes	262
Oölogist's Exhibit of Eggs.....	90, 154
Public Information	157
Snyder, Fred D.....	157
Wren, Baird's.....	280
Wren, Bewick's.....	47
Wren, Carolina.....	46, 238, 280
Wren, Florida.....	177
Wren Had Revenge, How a Canon.....	225
Wren, House.....	143
Wren, Long-billed Marsh.....	22, 43, 108, 142
Wren, Parkman's	78
Wren, Rock.....	184
Wren, Short-billed Marsh.....	141
Wren, Winter.....	58
Yellow-throat, Maryland.....	45
Yellow-legs.....	302
Yellow-legs, Greater.....	302





VOL. X.

ALBION, N. Y., JAN., 1893.

NO. 1

50c. per Year.

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 25 words. Notices over 25 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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WANTED.—Strictly first-class singles (large eggs preferred), a pair of strapped climbing irons (new) and a 22 cal. rifle for 1000 U. S. and foreign postage stamps, value \$25. Address R. SANFORD, 1, Cottage street, Rutland, Vt.

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YOUR JUDGEMENT is wanted. On March 1st I shall issue a few supplementary pages to the New “Standard Catalogue of N. A. Birds”. If you pose s a copy and in your honest opinion you are convinced that the prices should either be changed or added to certain species, I shall consider it a personal favor if you will give me the benefit of your opinion at an early date, not later than Feb. 15th. Your opinion will be most carefully considered and whether adopted or not a complimentary set of these pages will be mailed you *gratis*. Faithfully, FRANK H. LATTIN, Albion, N. Y.

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Our Annual Offer

We quote the following Liberal Offers until Feb. 1st,
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For \$1.00 you can select Eggs to the amount of \$1.50
" 2.00 " " " " 3.50
" 8.00 " " " " 6.00
" 5.00 " " " " 11.25
" 10.00 " " " " 25.00
" 25.00 " " " " 75.00

This offer will hold good until Feb. 1st and is doubtless the only chance to obtain eggs at so low a rate of ns during 1893.

All specimens will be carefully packed in strong tin or wooden boxes and sent at purchaser's risk by mail, or at our risk and purchaser's expense by express.

SECOND-CLASS SPECIMENS can be furnished of most of the species at one-half the price of a first-class one. Parties ordering second-class Eggs must name a list of extra Eggs to be used as substitutes.

SETS. We can furnish sets of species preceded by *.

A POINTER.—Collectors well know how readily they can exchange some cheap egg, not found in their locality with local collectors for specimens worth many times as much. Many wide-awake collectors will doubtless lay in a large supply for this purpose.

I might add that if your collections are in need of any species included in offer, an opportunity to purchase at so low a rate may *never* occur again.

Horned Grebe.....	\$ 20	*Least Bittern	20	Bald Eagle	3 50
*American Eared Grebe	15	Great Blue Heron	25	*American Sparrow Hawk	20
*St. Domingo Grebe.....	50	Snowy Heron	15	*American Osprey	50
*Pied-billed Grebe.....	10	Reddish Egret	35	American Barn Owl	30
*Black-throated Loon.....	1 50	Louisiana Heron	12	American Long-eared Owl	35
*Red-throated Loon	75	Little Blue Heron	12	Barred Owl	1 00
Murre.....	20	Green Heron	12	Florida Barred Owl	1 25
*California Murre	20	*Wk-crowned Night Heron	12	Screech Owl	50
Skua	50	Y'w-crowned Night Heron	20	Florida Screech Owl	50
Parasitic Jaeger	50	*Limpkin	75	Texan Screech Owl	50
Kittiwake	40	Virginia Rail	20	California Screech Owl	50
Herring Gull	20	Sora	10	Great Horned Owl	1 00
American Herring Gull	20	*Florida Gallinule	10	Western Horned Owl	1 00
Mew Gull	25	*American Coot	68	*Burrowing Owl	15
Franklin's Gull	35	Wilson's Phalarope	75	Groove-billed Ani	1 00
Caspian Tern	50	European Snipe	25	Road-runner	25
Royal Tern	40	*Bartramian Sandpiper	35	*Yellow-billed Cuckoo	15
Cabot's Tern	40	*Spotted Sandpiper	15	Black-billed Cuckoo	15
Forster's Tern	10	Long-billed Curlew	1 00	Belted Kingfisher	20
Common Tern	98	Whimbrel	30	Hairy Woodpecker	50
Arctic Tern	10	*Lapwing	15	Southern Hairy Wood- pecker	1 00
*Least Tern	68	Golden Plover	40		
*Sooty Tern	35	*Killdeer	20	Harris's Woodpecker	75
*Bridled Tern	1 00	Ring Plover	20	Downy Woodpecker	20
Black Tern	10	Bob-white	10	Gairdner's Woodpecker	50
*Noddy	50	*Florida Bob-white	15	Red-cockaded Woodpecker	1 50
*Fulmar	75	Texan Bob-white	10	Hair'd Woodpecker	1 00
Manx Shearwater	1 00	*Chestnut bellied Scaled Partridge	35	Wh te-headed Woodpecker	1 00
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*Yellow-billed Tropic Bird	2 50	*Ruffed Grouse	15	Pileated Woodpecker	1 00
*Booby	1 75	Willow Ptarmigan	1 00	Red-headed Woodpecker	68
Gannet	35	Rock Ptarmigan	1 00	Californian Woodpecker	40
Cormorant	50	*Chachalae	75	Lewis's Woodpecker	35
*Double-crested Cormorant	25	*White-crowned Pigeon	1 00	Red-bellied Woodpecker	25
Farallone Cormorant	50	*Mourning Dove	03	Golden-fronted Woodpecker	50
*American White Pelican	35	White-fronted Dove	35	*Flicker	03
*Man-o'-war Bird	1 00	*White-winged Dove	20	Red shafted Flicker	10
American Merganser	1 50	Ground Dove	10	Chuck-will's-widow	1 50
Red-breasted Merganser	75	Mexican Ground Dove	53	Nighthawk	40
European Tern	20	Cooper's Hawk	30	Western Nighthawk	40
Green-winged Teal	50	Harris's Hawk	60	Texas Nighthawk	40
*Blue winged Teal	20	Red-tailed Hawk	50	Chimney Swift	12
Canvas-back	1 25	Western Red-tail	00	*Ruby-throated Humming- bird	50
Barrow's Golden-eye	1 00	Red shouldered Hawk	35	*Black-chinned Humming- bird	50
Ruddy Duck	35	Florida Red-shouldered Hawk	65	*Costa's Hummingbird	75
*American Flamingo	1 60				
American Bittern	75				

*Anna's Hummingbird	50	Ch'stn't collared Longspur	25	White-eyed Vireo	15
Scissortailed Flycatcher	10	Vesper Sparrow	05	Bell's Vireo	15
Kingbird	03	Western Vesper Sparrow	15	Prothonotary Warbler	25
Arlenis Kingbird	06	Oregon Vesper Sparrow	15	Blue-winged Warbler	1 100
Crested Flycatcher	12	Savanna Sparrow	10	Yellow Warbler	05
Phoebe	01	Grasshopper Sparrow	20	Magnolia Warbler	50
Say's Phoebe	15	Western Grasshopper Sparrow	20	Black Poll Warbler	75
Black Phoebe	15	Lark Sparrow	05	Prairie Warbler	40
Wood Pewee	12	Western Lark Sparrow	15	Water Thrush	50
Western Wood Pewee	20	*Gambel's Sparrow	15	Louisiana Water-Thrush	50
Western Flycatcher	20	Clipping Sparrow	02	Maryland Yellow-throat	12
Acadian Flycatcher	15	Field Sparrow	03	*Yellow-breasted Chat	08
Little Flycatcher	25	Slate-colored Junco	20	Long-tailed Chat	15
Trail's Flycatcher	15	Black-throated Sparrow	02	American Redstart	15
Prairie Horned Lark	15	Song Sparrow	02	American Dipper	1 00
Desert Horned Lark	21	Desert Song Sparrow	35	*Mockingbird	05
Texas Horned Lark	30	Heermann's Song Sparrow	10	*Catbird	62
American Magpie	15	Samuel's Song Sparrow	02	*Brown Thrasher	03
Yellow-billed Magpie	35	Swamp Sparrow	12	*Semmett's Thrasher	15
*Blue Jay	01	*Texas Sparrow	10	*Curve-billed Thrasher	15
Florida Blue Jay	25	Towhee	10	*California Thrasher	20
California Jay	29	*Spurred Towhee	20	*Acus Wren	12
*American Crow	05	*Oregon Towhee	25	Bewick's Wren	25
Florida Crow	35	California Towhee	10	Vigor's Wren	25
Northwest Crow	35	*Cardinal	05	Baird's Wren	25
Fish Crow	35	*Texan Cardinal	25	House Wren	05
*Starling	10	*Rosebreasted Grosbeak	10	West-in House Wren	08
Bobolink	25	*Black-headed Grosbeak	15	Long-billed Marsh Wren	05
Cowbird	03	Blue Grosbeak	20	Tule Wren	12
*Dwarf Cowbird	10	Western Blue Grosbeak	20	White breasted Nuthatch	35
*Red-eyed Cowbird	40	Indigo Bunting	08	Slender-billed Nuthatch	75
*Yellow-headed Blackbird	03	Lazuli Bunting	20	Brown-headed Nuthatch	25
*Red-winged Blackbird	10	Painted Bunting	10	Tufted Titmouse	35
*Bicolored Blackbird	15	Dickkissel	05	Texan Tufted Titmouse	75
*Tricolored Blackbird	10	Lark Bunting	25	Plain Titmouse	50
Meadowlark	10	Louisiana Tanager	75	Chickadee	12
*Western Meadowlark	10	Scarlet Tanager	25	Oregon Chickadee	35
*Orchard Oriole	06	Summer Tanager	25	Carolina Chickadee	15
*Baltimore Oriole	03	Purple Martin	12	Californian Bush-Tit	15
*Bullock's Oriole	10	*Cliff Swallow	03	Verdin	35
*Brewer's Blackbird	03	Barn Swallow	05	Blue-gray Gnatcatcher	20
*Purple Grackle	05	Tree Swallow	15	Western Gnatcatcher	50
Florida Grackle	10	*Bank Swallow	03	Wood Thrush	06
*Bronzed Grackle	05	Cedar Waxwing	10	Wilson's Thrush	12
Great-tailed Grackle	15	*Phainopepla	35	*Russet-backed Thrush	15
Boat-tailed Grackle	15	*Loggerhead Shrike	08	Olive-backed Thrush	35
*House Finch	05	*White-rumped Shrike	08	Hermit Thrush	30
Redpoll	35	*California Shrike	08	*American Robin	03
*American Goldfinch	05	Red-eyed Vireo	10	Western Robin	10
Western Goldfinch	10	Warbling Vireo	15	*Bluebird	02
*Arkansas Goldfinch	10	Yellow-throated Vireo	25	Western Bluebird	12
Lawrence's Goldfinch	20			Mountain Bluebird	12
				English Sparrow	02

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62	" " " " " Dec. "
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86	" " " will expire Dec. "
92	" " " " " June 1893
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Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad. paid then *is paying yet*. He has been kept constantly busy, employs three men to assist him, clearing *on their labor* from \$10 to \$15 a day distributing circulars at \$3.00 per 1000 for many firms who saw his ad. in THE HERALD. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm who employ you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30, \$15 in advance and \$15 when work is done. Parents make your boys a present. Start them in this growing business. Begin this neat business before some one in your county gets the start of you. "Come in on the ground floor." Instructions How to Conduct the Business, Free, to each distributor ONLY, who sends us \$2.40 cash or postage stamps for a 4 line "ad".

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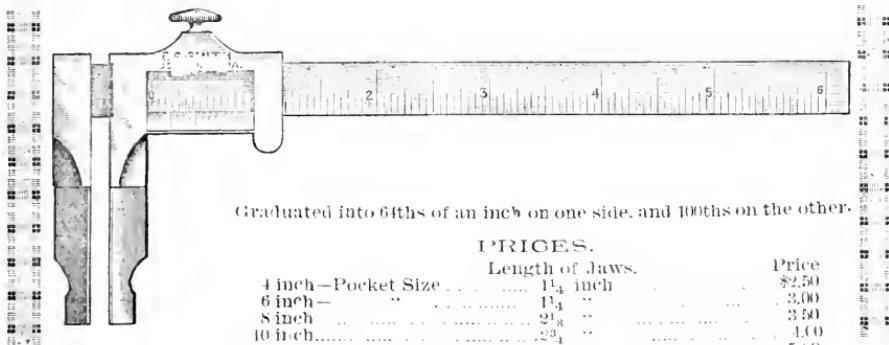
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to my patrons, it is the intention to furnish them with an instrument that is Accurate, Reliable, and of convenient and Neat Size, for a Moderate Price, which will bring them in the reach of all.

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ALL future transactions in Birds Eggs should be had with "Lattin" must be based on the Prices given in the New "Standard Catalogue."

WORLD'S FAIR SOUVENIRS.

How you can get one of the Columbian half Dollars.

The World's Fair souvenir coins are "going like hot cakes," and those who want to get one or more of them will have to bestir themselves or they will be too late. The desire for one of these mementos of the Exposition seems to be almost as universal as is the interest in the Exposition itself, and orders for them have been sent in from all parts of the United States and also from foreign countries.

On the obverse side of the Columbian half dollar appears the head of Columbus, designed from the Lotto portrait, and surrounding it the words, "World's Columbian Exposition, Chicago, 1893." On the reverse side appears a caravel, representing Columbus' flagship, and beneath it two hemispheres. Above the caravel will be "United States of America," and beneath the hemispheres, "Columbian Half Dollar." There is no doubt that this coin will be regarded as the most distinctive and highest prized cheap souvenir of the World's Fair.

All of these souvenir coins, except five, are being sold at a uniform price of one dollar each. For the first coin struck off \$10,000 has already been offered, and various prices have been bid for the 400th, 1492d, 1892d and the last coin. Desiring that these souvenirs be distributed as widely as possible among the people, and that all irrespective of locality, have an equal chance to obtain them, the Exposition authorities have sought to prevent syndicates and others from purchasing large quantities and thus "cornering" the sale. On the contrary, they have arranged to supply banks, business houses and individuals in all parts of the country with as many as they desire to distribute among their patrons, customers or friends. They require only that the orders must be for fifty coins, or some multiple of fifty, and that the order be accompanied by the cash, at the rate of one dollar for each coin. A great many banks and business firms have gladly complied with these conditions and ordered each from 50 to 20,000 of the coins.

Notwithstanding these conditions have been widely published, still a vast number of inquiries by letter has been received at Exposition headquarters asking how the coins may be obtained.

The best way is to get them through local banks, all of which are no doubt willing to accommodate in that way their patrons and the residents of the city or town in which they are doing business. If, however, for any reason it is desired to obtain them otherwise, the proper method is to form a club of subscribers, for fifty coins, or some multiple of fifty, and select some one member of the club to send on the order and money and to distribute the coins when received. Orders should be addressed to A. F. Seeger, Treasurer World's Columbian Exposition, Chicago.

World's Fair Notes.

Ohio will erect a mineral cabin in the Mines building at the World's Fair to illustrate its mineral resources. The cabin will be 32x61 feet in dimensions and twenty-three feet high and be constructed entirely of Ohio mineral products.

The section from one of the big California redwood trees, which the government will exhibit in its buildings at the World's Fair, has arrived at the Fair grounds. Eleven freight cars were required to convey it across the continent. It measures thirty feet long by twenty-three feet in diameter. The section is hollowed out and when placed on end, divided into two stories and lighted, as it will be, it will form a rustic house large enough for a family to live in.

Excursion Club to Attend the World's Fair.

If you have any desire to visit the World's Fair at Chicago, bear in mind that the United World's Fair Excursion Co. is a sound organization, with ample capital to fulfil their promises. The company sells tickets on the installment plan, refunding all but first payment if you fail to go, apply to United World's Fair Excursion Co., N. E. Dep't, 406 Exchange Bldg, Boston, Mass.



THE OÖLOGIST.

VOL. X.

ALBION, N. Y., JAN., 1893.

NO. 1

A Field Naturalist's Outfit

As many of the readers of this interesting magazine devote a good part of their time to collecting bird's skins as well as eggs, I've no doubt what I may here say may be of considerable interest to many of my readers.

During ten years experience in the field, as a collector, I've handled a large number of specimens, and used in the same length of time several different outfits; but I can truthfully say I have never received so much benefit from any of them as the one I now possess. But before describing my outfit I would like to say a few words to the collector in a general way:

First of all you will want to secure the specimens on which to use the tools I shall hereafter describe. Should the collector reside in a part of the country where big game, as well as small, abounds he will no doubt like to secure a few specimens of such animals as Deer, Bear, Panther, etc., and if he should have the luck to meet up with such animals and only have a small "collecting gun," such as is recommended by the general writer, the chances are the "big bird" (?) makes his escape and leaves you to mourn a trophy worthy months of labor to preserve. It is true some collectors, so situated, carry along a rifle as well as a collecting gun, but a rifle is very destructive to small game rendering them totally unfit for mounting, and on the other hand the general "collecting gun" is too small for anything larger than a robin. The question then is, what is the best gun I can get for collecting both large and small specimens, without being loaded down with two guns or having to carry along a heavy three-

barrel combined shot gun and rifle—as I've seen some collectors do?

This was a question which had bothered me for a long time, till about a year ago I found just what I wanted in a single shot combined shot gun and rifle. I had known of such an arm in the Maynard, but it was rather too expensive for me.

Looking over a gun catalogue one day, I came across the following description, i. e., "Merwin, Hulbert & Co's Rifles, with Interchangeable Shot Barrels." Now I have it! And the price, Great Scott! only \$13.75. At once I sat down and wrote an order for the above gun and in a short time I had it in hand. Ah! what a little beauty. The rifle barrel is 28 inches in length, using the regular 38 calibre Winchester Model 1873 cartridge, which carries 40 grains of powder and 180 grains of lead. The shot barrel is 30 inches in length, using the regular 16 gauge paper or brass shot shells. For penetration or accuracy it equals anything I've ever shot. With shells properly loaded I've killed, with the shot barrel, birds and animals from the Hummer up to the Red Lynx and Gray Fox. The rifle barrel has great penetration when used with regular Winchester factory ammunition, which I would always recommend, and when properly used never fails to bring down the Deer and Bear. When out collecting I carry in my shooting coat—of many and large pockets—ammunition for both rifle and shot barrels. I nearly always start out with the shot barrel in the frame and the rifle barrel in a canvas case slung by a strap over my shoulder. I can quickly and easily change, by the screw attachment holding the barrel to the stock, from the

shot gun to the rifle, and changed from the bird hunter of a few seconds before into a mighty nimrod armed for the fiercest denizens of the woods. The weight of the gun with the shot barrel attached is but $5\frac{1}{2}$ pounds, and with rifle barrel on your back the whole arm does not exceed 10 pounds in weight. In collecting various specimens with the shot barrel I use the following loads.

For Birds (Hummer to Robin) $1\frac{1}{2}$ dr. powder, $\frac{1}{2}$ oz. dust shot.

For Birds (Robin to Grouse,) $2\frac{1}{2}$ dr. powder, $\frac{1}{2}$ oz. No. 8 shot.

For Hawks, Owls, Eagles, Ducks, $2\frac{1}{2}$ dr. powder 1 oz. No. 6 shot.

For Rabbits, Crows, Foxes, etc., 3 dr. powder, 1 oz. No. 2 shot.

For all game exceeding the Fox in size I use the rifle barrel and find it does splendid work. By following above directions for loading and using two felt wads over the powder and one pasteboard wad over the shot, the collector need never have any fear of losing his specimens if he can shoot at all.

Parties residing in the west, can obtain the "M. H. & Co's." Combined Shot Gun and Rifle from the E. C. Meacham Arms Co., St. Louis, Mo. Those residing in the east can obtain it of Jno. P. Lovell Arms Co., Boston, Mass., or any first class dealer in sportsmen's supplies.

To Collectors contemplating purchasing an all-around collecting gun I can earnestly recommend the above arm. It is handsomely finished, a strong, safe and hard shooter, and in every way a much desired weapon.

Should any of my readers be of the wandering, camp-out style of collector and often get too far away from a house in which to lodge at night he should obtain a good Army Knapsack which should be filled out with the following outfit for camping and collecting, i. e.

2 Gray Wooden Blankets (light weight),

1 Army Poncho, or Rubber Blanket, which is a combined blanket, tent and coat.

1 Sharp Hunters Axe, or Hatchet.

1 Tin dish and tin cup, the latter for making coffee in out of which same may be drank.

1 Knife and Fork.

1 Frying pan (smallest size)
Matches.

And for use in above utensils 3 lbs. flour, ready sifted and mixed with baking powder, which with the addition of water is ready for baking in the frying pan.

2 lbs. Fat Bacon.

$\frac{1}{4}$ lb. Butter.

4 Tablespoonfuls ground Coffee.

Pepper and Salt, and for a luxury a small quantity of sugar may be taken along.

The above, with the addition of any game he may kill, will plentifully provision a most hearty eater for a 3 days hunt. With an outfit of the above description, provided of course the hunter is properly clothed, one need never have any fear of the weather, which is such a hinderance to too many. One can lay out in the stormiest weather of either rain or snow, in summer or winter, with the addition of a good log fire in a properly selected camping place and feel no discomfort.

As to ammunition for a three days tramp, I generally take along 25 rifle cartridges for large game and about 35 shot cartridges loaded with various sized shot for smaller specimens.

After packing all these articles away in your knapsack you will find you still have room for the following.

Skinning outfit:

2 Scalpels, of sizes

1 pair Shears, heavy.

1 " Scissors,

1 " Spring Forceps.

1 Brain Spoon.

1 Set Chains and Hooks.

Needles and Thread, $\frac{1}{2}$ lb. Cotton

Wool for making bird's and small mammal skins.

1 lb. Arsenical Soap (Hard)

With the addition of a good hunting knife^g of say 7 inch blade for skinning large mammals; and killing them too when too closely quartered by such a "varmint" as an old she Bear; an oilstone and oil for sharpening knives and our skin-making outfit is complete enough for all practical purposes.

Such an outfit as I have here described will, with gun and everything complete, weigh about 40 pounds, a weight which any medium sized, healthy man may carry from morn till night without much fatigue.

A few words in regard to the proper clothing for a collector who contemplates spending the long wintry nights in camping out and I am through. My outfit consists of good heavy underclothing of wool, with heavy overshirt and drawers of the same material; a pair of heavy brown English corduroy pants and vest and a heavy 10 oz. Duck shooting coat with large game pockets. For foot wear I use extra heavy Woolen Stockings reaching above the knee, and a pair of Land Hunting Shoes, lacing from instep to knee, the legs being made of soft leather and foot of heavy leather, with heavy, well nailed soles. Shoes answering this description can be bought for about \$4.00 of Montgomery, Ward & Co., Chicago, Ill. Shoes of this description are in every way a most serviceable and easy, yet retaining strength and lightness to a remarkable degree. Clothing of above description will stand almost any amount of wear and tear and still come out all right. Such an outfit may cost a right good sum in the beginning, but will well repay the collector who provides himself with one like it.

The foregoing, from beginning to end, is a faithful description of my outfit as it now lies before me. With it I have spent many delightful days roaming

the mountains of the wildest and most picturesque portion of West Virginia, camping out wherever night overtook me, preparing my specimens by a roaring fire ere I enjoy the soothing pipe.

After skinning and packing away the fruits of the days chase, sometimes not till midnight, with what joy do I lie down on my blankets and sleep with nothing but the blue sky and twinkling stars overhead for my canopy; and when again Old Sol peeps over the eastern hills I am up and away on another tramp after the "beasts of the fields and fowls of the air." Only those who roam the hills and mountains and fields in quest of such secrets as nature can unfold to them can enjoy what is to others hardships innumerable.

Give me this life among the birds and beasts and I am happy.

THAD SURBER
White Sulphur Springs, W. Va.

The Golden Swamp Warbler.

This name seems very fitting for this beautiful warbler of which my eastern readers see a little. Dried skins, reposing in the cabinet drawer, convey very little, if any, idea of their beauty as when seen in a willow swamp. Never had I realized their beauty, until I stood holding one in my hand. Although common here for years back, I never studied them, to any extent, in their haunts, until the last two preceding years. Even now, my knowledge of the Prothonotary is limited and I can only give the results of what few observations I have made.

The last few days of April are very sure to bring a few early arrivals, but the bulk of them arrive in the first or second week in May. They are shy and silent, and not at all like they are two or three weeks hence.

You will not find them in the high, dry woods, where the majority of other warblers are found, but go to the bot-

tom lands. Here, in the willow swamps, where decayed, water soaked stumps are scattered thickly here and there among the willows, you will make the acquaintance of the Prothonotary.

In the breeding season, the usual song of the male bird can be heard from early morn until dark. It is very pleasing to the ear and much resembles, at a distance, the notes of a Solitary Sandpiper, but a description would be useless.

The males are very pugnacious at this season and fierce encounters frequently take place. I have often seen two bright little fellows fall into the water, while fighting in mid air, but dart off in opposite directions like two golden meteors.

The great quantities of drift-wood floating in the stagnant water among the trees, contain myriad of insects upon which these birds feed. Here, one can see them, hopping from log to log, feeding on an insect there or pulling some unfortunate spider from a crevice here, and occasionally running up the sides of a stump in the manner of a creeper. The male is a venturesome, little fellow, and, while the female is sitting, explores every nook and crevice in the vicinity, sometimes being quite surprised at meeting one of his tribe in a hole that he is about to enter. I, at one time, saw a male clinging to an old mossy stump and the contrast of colors was beautiful.

Soon after their arrival from the south, mating begins and the two little lovers, after wandering and exploring, select some cavity in a water soaked stump for their domicile.

The stump selected, is generally a short one, and, in nearly all cases, either standing in or projecting over the water. I have found stumps, containing nests, on dry ground, but in these cases, the nests being built at high water, which, receding left the stumps high and dry. The heights of

the holes and stumps vary from one to fifteen feet, the latter being rare. The average height is about three feet above the water.

The cavity is filled with materials, gathered close at hand, within two or three inches of the entrance. These materials differ considerably in some nests, but an average nest is built of bark strips, dried grass, dead leaves and moss. Some have an addition of fiberous roots, stems and hair, while others lack the moss. The cavity of the nest is neatly rounded, measuring about two inches in diameter by one and a half in depth. A few nests out of the ordinary line are worth describing.

Probably the most handsome nest was found in a large, rotten, water soaked cavity, within a few inches of the water. The materials were entirely of bright green moss, kept fresh by its damp situation. This nest filled with its speckled eggs and the golden yellow birds, will long be retained in the memory of the writer. One nest was constructed partly of snake skins, in a deep bowl-like hollow, on the top of a stump. I found a nest, and also one in an old woodpecker's hole about twenty feet above the water in a solid dead tree. I have never found a nest in an out building as has been described by some.

The eggs of this warbler are exquisite. Very little idea can be obtained, from a few eggs, of the vast variation in color, size and shape. The average egg is of a glossy, creamy white, blotched, spotted and speckled with a rich chestnut red. Some do not show the gloss and generally have only a few shell markings. Others are more of a buff shade, while some are so thickly covered with markings as to completely obscure the ground color. Lilac markings are frequent. Some of my finest eggs are clear white, very glossy, and

finely speckled with chestnut and lilac.

The number constituting a clutch, varies from four to seven, rarely the latter. The first clutch commonly consists of five or six; the second of four and sometimes five. I have found in July, clutches of one, two and three incubated eggs, possibly indicating a third laying.

Very little remonstrance is made by the birds when the nest is molested and some do not even venture near. In some places, the birds are found breeding in small colonies, and many nests can be found within a surprisingly small area. A friend found a double nest in one of these colonies; the lower containing seven eggs and the upper five. No Cowbird's eggs were in either nest although I have found them in a few nests.

After the breeding season, the birds remain very quiet, and in September, take their departure for the sunny South.

W. E. LOUCKS,
Peoria, Ill.

Bird Nesting in an Illinois Swamp.

The Florida Galinule is very common in some parts of this swamp, and I was able to collect a number of fine sets.

The hunters of the swamp call this bird a "Red Nose" to distinguish it from the Coot and the bright vermillion red of the bill and frontal shield will readily be noticed in contrast to the larger whitebill of the Coot with brown frontal shield and brown spots near tip of bill.

The nest is formed by bending down the rushes to form a platform and placing a quantity of dry rushes on the platform thus made until it reaches a height of 2 or 3 inches above the level of the water and will rise and fall with it to a certain extent.

The nest is always placed so the birds can swim to and from it. The eggs are from 6 to 10 in number and of a yellowish (or sometimes greenish brown) ground color, blotched and spotted with brown of various shades. The markings appear to be in the shell itself, not on it.

Six eggs from different sets measure 1.90x1.18—1.76x1.18—1.92x1.24—1.65x1.13—1.73x1.23—1.61x1.23.

The "Cluck cluck" of the King Rail or Stage Driver, from its call, could be heard at any time but very few nests were to be found. The ability of these birds to keep out of sight was amazing and it took five men and two dogs to flush my first one.

Their nests are made in a clump of grass and are composed of fine grass and a few rushes. From their location I concluded that the heavy rains had flooded most of the nests, which accounted for my not finding more.

The eggs are from 6 to 12 in number and are from a dull white to a creamy yellow in color spotted with reddish brown, many of the marks being so deep in the shell as to give the appearance of having been washed partly out.

Five eggs measure 1.66x1.21—1.57x1.18—1.71x1.22—1.67x1.24—1.68x1.24.

The American Coot breeds quite plentifully in some parts of this marsh, laying from 6 to 10 eggs.

Its nest cannot be distinguished from that of the Florida Galinule so no description is necessary.

The eggs, however, are readily distinguished as they are of a clayey yellow ground color, finely dotted over the whole surface with black specks.

They seem to lay earlier than the Galinule for incubation was well advanced in all the sets I took.

Five eggs measure 1.91x1.31—1.92x1.34—1.90x1.36—1.92x1.35—1.94x1.37.

The marsh where I collected is one of a number laying in Henry, and adjoining counties, and is about 5 miles

across and about 3 wide. At the time of my visit it was covered with water about 3 feet deep, and the marsh grass and rushes were about 3 feet above the water. In the finer marsh grass I saw a number of small nests mostly Marsh Wrens but did not find eggs in any of them.

One thing has always puzzled me and that is how a Gallinule will call and seem just under one's feet and still be 80 rods away and at first I was often fooled by them. Several times I heard a call exactly like a turkey hen's "put put" and the squeaks, squalls, groans and howls coming from the marsh early in the morning and late at night would give the impression that the birds are not at all happy.

Great numbers of Black-crowned Night Herons nest in a "town" out in the swamp and I was able to get some very fine sets.

The shore birds seemed to be entirely wanting. I only saw a few Sandpipers on an island in the river.

A few ducks nest here yet, and as I saw a few Great Blue Herons I think a careful search would reveal a heronry and perhaps some Cormorants in it too.

Least Bitterns were very abundant and just beginning to make nests when I was there, but next year I hope to be with them at the right time.

A. C. MURKINSON, D. D. S.

BIRDS AS PETS.

One Way of Taming Them.

There are very few of us who do not admire pets of some sort. We ornithologists take birds as ours. When we go out collecting, our note book is always with us (or should be)—and as we sit down under some tree, probably for a rest, we cannot help but study the habits of the feathered beauties as they come down close beside us. Here you will find that by dotting down the hab-

its of the different species that it will interest you and will prove to you in the future for reference and pass time.

Too much can not be said in regard to the note book. There is always plenty to write down—note the food and locality—different birds select,—all of which will be of use to you in collecting at another time.

It was in this way that I began to designate the birds that would make the best pets, and now, no matter where I am I can't help but observe any bird that may be in sight, and it seems that of late years the birds are tamer than they used to be, giving me a finer opportunity to study them closely, but on the other hand it may be that in studying them in this way they have come to my notice more.

A few notes on the subject might be of interest.

While out walking this spring I came across a flock of Pine Siskins feeding on dandelion seeds. I walked among them slowly, and much to my surprise, I stood no farther than four feet from some of them, and they kept on eating, occasionally stopping to look at their visitor. About the same time a pair of Evening Grosbeaks were eating last fall maple seeds close by the edge of a walk; I stopped as I was passing, they went off a few feet farther but gradually came back and resumed eating as if no one was present.

A pair of Green-backed Goldfinches nested near our residence and I could see they were becoming tamer as I watched them from day to day. One afternoon while standing by a bunch of dandelions, the female flew right down at my feet and began to eat. It remained there for some time before leaving.

I can safely say I tamed some Violet-green Swallows this season. A male and two females nested in a poultry coop in our yard. I would spare an hour each day by sitting on the back

porch, and as the birds would fly by I blew feathers into the air, which they would catch as well as our best ball players. I kept this up for some time, then tried to hand them feathers from a slender stick some two feet long. The birds were rather timid in taking them, but were not long until they would walk quite a ways on the top of a wire fence for the feathers. I would then break a portion of the stick off and repeat until finally they would take feathers from my hand. If I would imitate their note when they weren't around and they could hear me they would immediately fly down by me. I found in studying their habits that the females were the tamer. There is no mistake about the two females nesting together as they were closely observed and then too, two sets of eggs were laid in the nest, one of seven and the other of six eggs.

I will look for the trio to come back next year. Now I would like to know if the male bird was from Utah.

CLYDE L. KELLER,
Salem, Oregon.

The Ornithologist's Association.

The Ornithologist's Association met at Washington, Nov. 22, for organization, the summer vacation business, etc., having prevented the meeting at the regular time. The officers chosen were, President J. H. Langille, Vice-president A. B. Farnham, Recording Secretary and Treasurer Blanchard Miller, Corresponding Secretary W. R. Harr. The next meeting will be on the 4th of January, 1893 when we will hope to hear from the corresponding members concerning the findings in respect to the Crow family and their relatives.

WALTER R. HARR, Cor. Secy.,
Forest Glen, Monthly Co., Md.

NOVEMBER CONTEST.

Sixty-Five Judges.

Prize winners and credits received by each were as follows:

1. Oöteology for Amateurs. 207.
2. Fringillidat in Newton, Mass. 194
3. Some Trips for Hawks Eggs. 193.
4. Buzzard Island. 192.
5. The Chestnut-collared Longspur—78.

We also awarded a 6th prize to "Winter Visitors" which received 74 credits.

Seventeen Judges named the winning articles—None their exact order.

The Judges prizes were awarded as follows:—

1. No. 36—C. R. Marion, Lancaster, Pa. 1, 2, 4, 3, 5.
 2. No. 3—W. F. Mountain, East Orange, N. J. 1, 4, 3, 2, 5.
 3. No. 10—H. L. Vandegrift, Ambler Pa. 1, 3, 4, 2, 5.
 4. No. 24—H. F. Beaumont, Nashville, Tenn. 2, 1, 4, 3, 5.
 5. No. 22—Clarence Luther, Fayetteville, Ark. 2, 4, 3, 1, 5.
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The Osprey in Florida and Other Notes.

In the spring of the present year I had the good fortune to be with a survey party, which spent three months in the wilds of the east part of the State. And although I was very busy, had an excellent opportunity to watch the birds, but particularly the Osprey.

That grand bird whose beautiful flight and shrill scream, as he waves high in the air, thrills every move, and who, who watches these noble birds can help but love the beautiful and interesting family.

It was about the first of May that I was traveling down through those dreary flatwoods by mule teams, and ever and anon the scream of the Fish Hawk would reach my ears. A sharp glance around tree tops would soon reveal their huge domicile, a dead tree

which had dropped nearly all its limbs seemed to be the favorite perch for the nest. Most of the nests were merely saddled on one limb, up close to the body of the tree, and they ranged in size from two feet in diameter to huge piles of sticks as large as those of the Bald Eagle.

In a distance of about 50 miles I found 30 nests, which was a good many as I went in a straight line south and ran across these right in my path. The nests were always situated near a strip of marsh or a pond.

All the nests had young at this time and from their size I think they, the nests, must have contained eggs by the first of April or middle of March.

What surprised me was to find these birds building so far inland, away from even any large body of fresh water. But this section is not only represented by the Osprey, for the *Raptore*s are well distributed through several species, and, strangely, very few of any other varieties of birds.

It was on this trip that I obtained my first set of Meadow Lark and a set of what I firmly believe is the Cuban Martin. I took a set of this last from an old woodpecker's hole in a dead palmetto stub about ten feet up. The eggs were three in number, pure white and were laid on rotten chips at bottom of hole; the Martins are very abundant in that section and seem to nest almost exclusively in dead palmetto stubs.

My set of Meadow Lark's eggs was found accidentally by my mule nearly stepping on the nest. It was a beautiful marked set of four fresh eggs.

It was in this same strip of desolate marsh country that I found my first nest of the Pileated Woodpecker, the hole was dug in an old palmetto stub only five and one-half feet from the ground and contained three full fledged young. I came very near having one of my eyes picked out by one of the greedy youngsters as I stood staring into the hole.

On our return to the banks of the Indian River we camped for three weeks and we improved our time by more extensive tramps, my companions went fishing while I and a young man who was pressed into service hunted the reedy bog for Bitterns and Gallinules.

This was also the first time my eyes ever saw into a Least Bitterns or Gallinules nest.

We found ten sets of the Least Bittern, two of the Florida Gallinule and one of the Purple Gallinule.

The Bitterns nests were built about three feet from the water in thick clusters of rushes, while the Gallinules made a floating nest of dead rushes and made a beautiful sight. The sets ranged from 5 to 8 per nest and were nearly incubated at this time. I took a good many other notes, but will leave them for some other time.

WILLARD ELIOT,
Tampa, Fla.

Notes From Isabella Co., Mich.

Last spring my time was so much occupied by getting properly settled and at work in this new place that the collecting season was about over before I could pay much attention to Ornithology or Oölogy. However during my daily labors, my eyes and ears were ever open to the sights and sounds of bird life in this wild, beautiful and wierd locality.

At times when weary and tired of toiling to supply the wants of myself and family, I have been cheered to new vigor by the thrilling songs of our feathered friends who seem never to despair under any circumstances, and when seeing daily the parent birds industriously gleaning food for their young I have been led to reflect that the God of Nature who so bountifully provides for his feathered creatures has not neglected to provide as abund-

antly for man the materials and opportunities whereby he may provide for himself.

On May 3d while working in the woods I noticed a Hairy Woodpecker pluming herself and while watching her she flew about 70 yards and alighted upon an Ash tree in a swamp. The tree referred to was broken off at the height of about 50 feet and was dead for a few feet lower. In the dead portion were several Woodpecker holes, all old excepting one, below which my bird alighted and after scanning the vicinity very closely for some time she entered her nest. Upon examination I found her eggs to be four in number and perfectly fresh. A short distance from this find I flushed a La. Water Thrush from the roots of an upturned tree and there in plain view was her nest among roots, about 16 inches above water and containing six lovely fresh eggs.

On May 5th while felling hemlock stubs in a pasture I noticed several Robins making an unusual outcry and upon approaching a clump of bushes where they were a Saw Whet Owl flew away a short distance and desiring a specimen I cautiously approached it and was successful in killing it with a pole. I immediately noticed that it was a female and had been incubating. Just then I remembered that when a certain very dry, crumbly, rotten topped stub was felled that a cloud of dust and some bits of down arose and floated away in the air from the top of it. The thought of discovering broken eggs made me heart-sick, but instead, six young Owls were excavated from the ruins of what had been at a remote time the nesting place of a Flicker. The young varied in size from a little downy fellow to one larger than their parent and no two were the same size but were a perfect graduation. All had been covered with cream colored down and brown feathers had started

on the large ones. So brown were the feathers and so large one of the young that at first I thought them to be Sereech Owls, but the nest was proof of the species, for amongst bird feathers, mouse hair and cast up pellets, the feathers of the old Saw Whet Owls predominated. I regret very much that all the young had been killed by the falling of the tree, for I would like to have caged and tamed them.

Evening Grosbeaks were very common here last winter and I heard the loud notes of a few individuals as late as the middle of May.

Hermit Thrushes are an abundant summer resident. The only nest of this species observed was discovered while I was picking huckleberries. The eggs were four in number and closely resembled those of Wilson's Thrush, as did also the nest, which was placed amongst bog moss and well hidden by bushes of the huckleberry. The date of this find was about the last of July.

On August 5th I took pails and started out to hunt wild berries and after few hours' tramp discovered a marsh that no human berry pickers had meddled with. Before my delighted gaze were thousands of quarts of huckleberries of the largest size and nearly all ripe. Such a beautiful sight. The bushes about one foot high and laden with bunches of berries so large that they resembled sprigs of grapes. I filled my dishes in a few minutes and took a stroll through the marsh. I could not walk without crushing the ripe fruit by the quart. I observed a pair of Marsh Hawks and searched in vain for their nest. The shrubbery and trees surrounding the marsh resounded with noises of birds which surely were enjoying life to its fullest extent. The fruit-eating birds of this locality are, during the summer abundantly supplied with wild fruit, such as strawberries, red and black raspber-

ries, dewberries, blackberries, cranberries, wild grapes and berries of the wintergreen. Thus has nature in this locality supplied the fowls of the air with a variety of fruits the year round, and so lavish is the supply that last season many thousand bushels of wild fruit rotted where they grew.

JOHN A. MOROEN,
Sherman City, Mich.

The Birds Which Breed in Central Park New York City.

Few people have any idea of the number of birds which breed annually in Central Park New York City.

The park is a stretch of land two and one-half miles long by one-half mile wide and is in the heart of the great city. In the spring it serves as a resting place for thousands of our birds on their migrations northward and in the fall on their return southward.

Early in the morning numbers of our feathered songsters may be heard warbling in the trees and bushes of this beautiful park, but they are fast decreasing in numbers each year and the time will come when in our early walks we will not be gladdened by their beautiful songs.

The first nest which I found in the park was that of a Song Sparrow (*Melospiza fasciata*). The nest was composed of grass lined with horse hair and was placed in the tall grass near a pathway and was found quite by accident. I was walking along when I heard the note of a Cowbird (*Molothrus ater*) coming from the tall grass near by, stepping into the grass I flushed the Cowbird, which flew up from the grass a short distance ahead of me, going over to the place I found the nest of a Song Sparrow containing four eggs. The eggs were greenish white thickly spotted with specks of reddish brown and average .78 by .57 inches.

On the same day (May 4) I found an-

other nest of the Song Sparrow which was built in a low bush about eight inches from the ground, the nest was an old one built the previous year, it contained three eggs, size .57 by .58 inches.

The next nest was that of a pair of Cardinals (*Cardinalis cardinalis*). The nest was placed in a low bush, it was composed of twigs, leaves and vines and was lined with finer materials, it contained four eggs of a dull greenish white, with numerous spots of brownish olive, size .59 by .74 inches.

I found a nest of the Prairie Warbler (*Dendroica discolor*) which contained three eggs. The nest was composed of vegetable fibres and grass, and was closely woven making a very neat and close structure. It was in a thick bush about two and one-half feet from the ground. The eggs averaged .63 by .47. They were pure white with specks of reddish brown. It was found May 30th.

The Robins (*Merula migratoria*) are by far the most abundant breeders in the park. I have found a large number of nests, nearly all of which contained eggs. The nests and eggs are to well known to need description.

The Yellow-billed and Black-billed Cuckoos have been known to breed here also Yellow Warblers, Thrushes, Brown Thrashers, Red-eyed and White-eyed Vireos and many other birds and of course the ever present English Sparrow.

A number of years ago on the side of the lake among the thick reeds, before they were cut, a pair of Herons used to breed, but that time is now gone never to return.

R. C. WOODHOUSE,
New York City.

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THE OÖLOGIST,

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OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, ALBION, N. Y.
Editor and Publisher.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Albion, Orleans Co., N. Y.

* * Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Two Warblers.

Only four or five of the Warblers breed around here, and none are at all common, but by careful hunting one will see a good deal of some of them. The two that I propose to say a little about are the Prairie and the Parula Warblers, with which I have had something to do, but I have not been nearly so intimate with them as I would like to have been.

First, the Parula.

My first acquaintance with the pretty little bird and its nest was made in the Spring of 1887, I think. I was hunting nests in some woods about a mile below the city and was watching one of my very intimate little friends, a Blue-gray Gnatcatcher, whom I suspected of being engaged in building. The Blue-gray was in a hickory, when all of a sudden, a small bird crossed my vision with something in its mouth, and to my surprise, disappeared in a festoon of Spanish moss, with which the tree was decorated.

In all my experience (which was very limited, by the way) I had never seen a nest in hanging moss before, and could not imagine what kind of bird it was. When I went home I consulted an older friend of mine, and from my voluminous description of the bird, partly relieved my excitement by deciding that it could only have been one of the very rare "Purple-backed Blue-throated Green Wobblers," and immediately persuaded me to trade it to him.

I went back some time afterwards and, after quite an amount of trouble got the nest and three eggs, which we found out were those of the Parula Warbler, on consulting authorities a little more experienced than my aforementioned friend.

Such was my first meeting with the Parula Warbler and I have only found one more nest of the species since. That was found in a small oak tree not over thirty feet distant from the hickory and was in a much larger piece of moss. I found it by seeing the dark spots in the moss, and was much pleased to find four very prettily marked eggs in it.

I found this nest in 1891, and the previous year's nest was in the same bunch of moss about six inches above the new one. A friend of mine has found several nests and all of his were

in moss, too, so I do not think they build anywhere else.

The nest is composed of very fine grass and vegetable down and is lined with fine grasses and horse-hair, the whole structure being woven in the moss at the bottom and sides, and is about the size and shape of a Field Sparrow's nest. The bird seems to enter by only one hole and that is situated in the side of the moss, just above the rim of the nest.

The eggs are of a very delicate flesh color, spotted with light reddish and are of a very fine texture, with a polished look.

I do not know much of their habits, as they spend most of their time in tall trees from the tops of which you can hear their sweet little song every now and then.

Now, a few words about the Prairie Warbler.

This bird is much more sociable than the former one and is quite often seen. Their favorite haunts are woods that have been burnt over and have grown up with scrub oaks and thick underbrush. Here, they are at home and sit around catching their dinners or sit on the top of the tallest tree conveniently near their nests and sing. His is a peculiar song, but very pleasing to the ear. It consists of about six or seven syllables on an ascending key, and, with all due respect, somewhat resembles the cry of a young Turkey.

Although I have hunted their nests a great deal, I have never collected a set of eggs from a nest of my own. I have found nests, but they were all either old ones, or new ones that the birds did not complete. On the contrary, I have a friend who can find this Warbler's nest more easily than the nest of most commoner birds. He generally finds three or four of their nests a year, collecting sets from about one-third.

This year he found a nest in a dog-

wood tree about five feet up, composed entirely on the outside of white cotton or wool and lined with fine grasses and horse-hair. The nest was equalled by the eggs, though, as he got the only set of five eggs out of it that was ever heard of round here, three being the usual complement, sometimes four.

However, the neatest part of the whole affair was—he gave the set to me. I found on looking the matter up, that sets of five were not uncommon.

Their nests are very dainty little structures, compactly built, and ranging from two to ten feet from the ground, usually about four. They are generally composed of everlasting, fine grasses, weed stems, cotton, spider-webs, etc., and lined with fine grasses and horse-hair.

The eggs are of a creamy back-ground with purplish markings and dots on them, generally thickest around the larger end.

A. R. HEYBIRD, JR.
Columbia, S. C.

A Collection of North Carolina Birds Eggs.

THOS. A. SMITHWICK.

32. Field Sparrow. 563.

Set d. Weaverville, N. C., May 10, 1891. Nest in bunch of grass, composed of weed stalks and grasses. 4 eggs, incubation begun, .64x.52, .60x.50, .62x.48, .61x.50.

33. Towhee. 587.

Set a. Weaverville, N. C., May 1, 1892. Nest on ground, of grasses and grape vine bark. 4 fresh eggs, .92x.72, .94x.72, .94x.72, .92x.72.

Set b. Weaverville, N. C., May 15, 1891. Nest on ground under pine bush, 3 eggs, incubation well along, 1.00x.71, .98x.70, .97x.71.

34. Cardinal. 593.

Set a. Raleigh, N. C., May 31, 1891. Nest 4ft. high, in briars; of weed stems and reed leaves, lined with grass. 3 fresh eggs, .96x.71, .95x.72, .97x.71.

Set b. Walke, N. C., April 30, 1892. Nest of weed and vine stems, dry leaves, reed leaves and grapevine bark,

lined with fine grass stems, 6ft. up in holly bush. 3 fresh eggs, 1.01x.73, .97x.72, 1.00x.73.

Set c. Bertie Co., N. C., June 27, 1890. Nest 8ft. up in pine bush. 2 eggs, incubation four-tenths, 1.04x.72, .98x.70.

Set d. Raleigh, N. C., May 16, 1890. Nest 4ft. high in briars. 3 eggs, incubation slight, .97x.73, .97x.73, .98x.72.

Set e. Raleigh, N. C., July 2, 1888. Nest 3ft. high in alder bush. 3 eggs, incubation slight, .95x.73, .98x.73, .96x.72.

Set f. Asheville, N. C. on French Broad River, April 8, 1890. Nest of grasses and lined with fine roots, 6ft. high in pine sapling. 3 eggs, incubation well along, .87x.68, .96x.66, .88x.67.

35. Indigo Bunting. 528.

Set a. Walke, N. C., June 1, 1891. Nest of leaves, reed shucks, weed stems, etc., lined with fine grass, placed in forks of small oak bush 2 ft. up. 3 eggs, small embryos, .70x.49, .72x.52, .70x.52.

Set b. Raleigh, N. C., June 18, 1890. Nest 6 ft. high in small ironwood. 3 eggs, incubation slight, .69x.53, .70x.53, .72x.54.

Set c. Raleigh, N. C., May 21, 1891. Nest 1 ft. high in thorn bush, of dead leaves and weed stems, lined with grass. 3 eggs, incubation slight, .67x.57, .66x.54, .67x.57.

Set d. Weaverville, N. C., June 5, 1891. Nest 3 ft. from ground in small bush. 4 eggs, incubation begun, .75x.54, .76x.54, .79x.55, .78x.53.

Set e. Weaverville, N. C., June 25, 1890. Nest of leaves, lined with grass, 18 in. from ground in small bush. 4 eggs, incubation begun, .70x.53, .73x.55, .71x.54, .69x.52.

36. Scarlet Tanager. 608.

Set a. Craggy Mountain, N. C., June 3, 1891. Nest 25 ft. from ground, and 15 ft. from body of tree. 4 eggs, 1 broken, incubation well along, .86x.64, .92x.60, .89x.60.

37. Summer Tanager. 610.

Set a. Sans Sonei, N. C., May 9, 1891. Nest of weed stems and grass, lined with finer grass, 15 ft. up on horizontal limb of oak. 3 fresh eggs, .89x.64, .93x.61, .91x.65.

38. Purple Martin. 611.

Set a. Walke, N. C., May 20, 1892. Nest of small sticks and leaves, 12 ft. up in bird box made in side of house. 6 fresh eggs, .98x.72, .99x.72, 1.00x.72, .94x.70, .91x.71, .94x.71.

Set b. Walke, N. C., May 20, 1892. Nest in bird box in side of house. 6 eggs, incubation slight, .98x.70, .95x.67, .96x.68, .99x.70, .98x.67, .98x.66.

39. Roughwinged Swallow. 617.

Set a. Walke, N. C., May 19, 1892. Nest of grasses and dried green leaves, in hole two feet long in hank over water, (Albemarle Sound), 7 fresh eggs, .77x.53, .73x.51, .71x.52, .72x.52, .74x.53, .74x.52, .72x.52.

40. Red-eyed Vireo. 624.

Set a. Raleigh, N. C., May 31, 1890. Nest 10 ft. up in fork at end of sweet gum limb. 3 eggs, small soft embryos, .76x.57, .80x.58, .80x.58.

Set b. Walke, N. C., June 4, 1892. Nest of bark, rotten wood, moss and spider webs, lined with fine grape vine bark, suspended 7 ft. up below forks at end of dogwood limb. 3 eggs, small embryos, .80x.57, .79x.56, .79x.56.

Set c. Weaverville, N. C., May 30, 1891. Nest in fork of oak bush, 6 ft. from ground. 4 fresh eggs, .83x.57, .83x.56, .84x.59, .85x.59.

Set d. Walke, N. C., May 12, 1891. Nest of strips of bark, spider webs, etc., lined with hair and fine grass, fastened below twigs of small maple 9 ft. from ground. 3 fresh eggs, .79x.55, .78x.54, .74x.54.

Set e. Raleigh, N. C., June 4, 1890. Nest 6 ft. high in sweet gum. 3 fresh eggs, .82x.56, .83x.56, .86x.57.

Set f. Raleigh, N. C., June 2, 1890. Nest 9 ft. high in sweet gum at end of limb. 3 eggs, medium embryos, .74x.53, .79x.53, .77x.53.

Set g. Raleigh, N. C., May 19, 1892. Nest 5 ft. high at end of maple limb. 3 fresh eggs, .80x.51, .78x.51, .79x.54.

Set h. Weaverville, N. C., May 25, 1892. Nest in oak tree 6 ft. from ground. 4 eggs, incubation well along, .78x.69, .89x.58, .84x.59, .78x.59.

41. Yellow-throated Vireo. 618.

Set a. Walke, N. C., May 21, 1890. Nest suspended between fork at end of beech limb, made of cotton, rotten wood, reed leaves, etc., lined with pine needles. 2 fresh eggs, .78x.58, .80x.57.

42. Mountain Solitary Vireo.

Set a. Craggy Mountain, N. C., June 3, 1891. Nest in beech tree, 20 ft. up and 15 ft. from body of tree, composed of fibres and lined with fine grass, outside covered with white spider webs and moss. 2 eggs, incubation begun, .82x.58, .80x.55.

Set b. Snow Ball Mountain, N. C.,

May 29, 1892. Nest in maple tree 15 ft. up and 12 ft. from body of tree. 2 fresh eggs, .86x.59, .84x.58.

43. White-eyed Vireo. 631.

Set a. Walke, N. C., June 22, 1891. Nest of bits of green moss, rotten wood and fine strips of bark, lined with fine grass, 8 ft. up suspended below limb of a bush. 3 fresh eggs, .71x.55, .71x.55, .67x.54.

44. Worm-eating Warbler. 639.

Set a. Walke, N. C., May 4, 1891. Nest loosely made of leaves and pine straw, lined with hairlike moss, placed in slight depression of the ground, sheltered by a fallen limb covered with leaves, on gently sloping hillside about 6 ft. from small run of water. 5 fresh eggs, .73x.55, .75x.54, .73x.57, .72x.54, .72x.55.

45. Yellow-throated Warbler. 663.

Set a. Raleigh, N. C., May 5, 1892. Nest on horizontal limb of pine, 35 ft. high. 4 fresh eggs, .67x.52, .68x.51, .68x.52, .68x.51.

Set b. Raleigh, N. C., May 4, 1891. Nest of grape vine bark, leaf stems, weed leaves, cocoons and other fibres, lined with cattail fluff and some hairs, 43 ft. up on horizontal limb of pine. 4 fresh eggs, .68x.48, .70x.51, .68x.49, .68x.50.

46. Pine Warbler. 671.

Set a. Walke, N. C., April 29, 1891. Nest of weed stems, pine stems, feathers, spider webs and other fibres, lined inside with hair and feathers, placed on horizontal limb of pine about 50 ft. from ground and 5 ft. from body of tree. 4 eggs, small, soft embryos, .71x.54, .73x.54, .73x.53, .72x.53.

Set b. Raleigh, N. C., April 28, 1891. Nest 31 ft. high on horizontal pine limb. 4 eggs, small, soft embryos, .71x.53, .73x.53, .73x.53, .72x.53.

Set c. Walke, N. C., May 4, 1891. Nest of grapevine bark, spider webs and other fibres, lined with hair and feathers, 35 ft. up on horizontal limb of pine. 4 fresh eggs, .70x.54, .70x.54, .73x.56, .73x.54.

Set d. Raleigh, N. C., April 28, 1890. Nest 39 ft. up near end of horizontal limb of pine. 4 eggs, small, soft embryos, .72x.54, .74x.54, .72x.53, .73x.54.

Set e. Raleigh, N. C., May 7, 1890. Nest 61 ft. high in pine. 4 eggs, one broken, medium embryos, .63x.54, .66x.54, .65x.54.

Wanted—Advice.

Having arrived a few weeks ago in Arizona with the prospects of remaining during the breeding season, I have very naturally interested myself in the birds, and also in the various old nests which are to be found in the brush and trees, with a view to getting ideas which would be of use when nesting season begins.

Now we are all aware that a number of desirable species in this locality, nest in the giant cactus; such as the Elf Owl, Gila Woodpecker, and Gilded Flicker; and finding all these species more or less abundant here, I made it the object of one of my first excursions to examine these cacti.

Well I have seen them in their native wilds, and also plenty of Woodpecker holes of all ages. But right here comes the pinch, and the point where I want advice. How in the name of common sense does any one ever reach those holes? Probably you all know what a giant cactus is like; if not imagine a young asparagus stalk magnified about fifty times, and covered from top to bottom as thick as they can comfortably grow with exceedingly sharp, stiff and tough spines, each about an inch long, and you have a fair representation of a giant cactus.

I have had some of the experience which falls to the lot of an oölogist; have climbed tall trees, and slim trees, and slippery trees, and rotten trees; suspended myself over cliffs, and from the ends of drooping branches at varying distances from the ground; waded in mud and water, and dug in the ground, but I never faced just such a problem as this.

Evidently climbers are of no use, even should they hold in the soft substance, I think the thorns would preclude their use. Even a rope does not seem to help the matter, as the crowns of the shafts offer no hold. True some

of the caeti are branched, but these branches are themselves almost always so high that even if one got into the crotch, he would still have to make a further ascent.

Of course it has been done and can be done again; Davie speaks of certain collectors taking sets of eggs from those caeti, and what I want to know is how they did it.

If locomotion on a pair of fifteen foot stilts was practicable on the desert sands of Arizona, obviously the problem would be solved to perfection, but unhappily it is not. Now I want some of those sets this season, and any hints from the readers of this paper would be received with gratitude.

H. H. D., Phoenix, Ariz.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than Feb. 10th. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We also give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judges whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain in the average, 2 plates and 264 pages strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talks about Business."

3d A collection of 20 common eggs.
4th A collection of 16 good minerals.
5th A 50 cent pkg. of Novelties.

To each Judge naming the five prize-winning articles in the exact order and not winning one of the five special prizes we will give a copy of the "Standard catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact

order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.

"Our Birds in Their Haunts."

My Dear Sir:

Please say through the OÖLOGIST that the cause of the great detention of my work, the printing of "Our Birds in Their Haunts," is this: The printers promising to put on it extra hands and work it off in a hurry, have simply worked it off at their leisure. Meanwhile they have gained time by telling me falsehoods, which I have unwittingly repeated to my subscribers. The work once partly done and largely paid for, it could not well be put into other hands. The printing is now about done, and as the binding is to be done elsewhere, I trust I shall soon have it away.

Yours truly,

J. H. LANGILLE,
Dec. 3, '92. Kensington, Md.

LATER.

My Dear Friend Lattin:

After the greatest efforts I have been able to make continuously since last May, I finally got the folded sheets of "Our Birds in their Haunts" into the hands of the binder last week. I shall hurry the binder all I can. He is a reliable man. I have positively suffered with anxiety over the matter. Can you say anything in the next issue of the OÖLOGIST to explain?

Yours most truly

J. H. LANGILLE,
Dec. 22, 1892. Kensington, Md.

HAVE YOU

RHEUMATISM?

Or do you know any friend or neighbor afflicted with any form of Rheumatism; if so send his or her address on a Postal Card to the

PARISH CHEMICAL CO.,

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Rheumatism has been conquered by them and they will prove it to you. It will cost but one cent to investigate this.

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Will be Presented during 1893 to
The Patrons, Contributors and Readers of
THE OÖLOGIST.

Our prize scheme during '92 has proved highly satisfactory to both ourselves and the participants, and we might also add to the readers of the OÖLOGIST. Taking these facts into consideration we have decided to not only continue making monthly awards during '93 but to almost, if not quite, *treble* their value.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7 50
Ridgway's "Manual of North American Birds".....	7 50
Chamberlain's Nuttal's Ornithology" (2 vols.).....	8 00
Goss's "Birds of Kansas".....	7 50
Wilson's and Bonaparte's "American Ornithology".....	7 50
Maynard's "Birds of Eastern North America" (text complete). 15 00	
Webster's "International Dictionary" (Merriam's latest edition).....	10 00
Washington Irving's Works (10 vols.).....	7 50
Wm. M. Thackeray's Works, 10 vols.....	10 00
Chas. Dickens' Works, 15 vols....	11 25
Jenk's "Comprehensive Commentary of the Holy Bible," 5 large 300 paged Volumes..	25 00
Sir Walter Scott's Works, 12 vols	12 00
\$10 worth of Phonographic Books and Publications.....	10 00
An Sqt. Jack Frost Ice Cream Freezer	6 50
A Due Bill good for \$31.50 towards a new \$46.50 Marlin Repeating Rifle	31 50
A Due-Bill good for \$33.00 towards a new \$15.00 American Union (same as New Home) Sewing Machine.....	33 00
A Due-Bill good for \$15.00 towards a new \$20 doublecase Odell Type writer	15 00

2nd Prize each month will be a part of "Maynard's Birds of East in North

America" each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50.

3d Prize—Brewer's "North American Oölogy" unbound, no plates, original price about \$3.00

4th Prize—Baird's "Review of American Birds" originally sold at \$2.00.

5th Prize—Mrs. St John's "Audubon the Naturalist." \$1.00.

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded a duplicate of the 5th prize.

Each article receiving at least one-half as many credits as the number of Judges will be awarded a year's subscription to the OÖLOGIST.

New Standard Catalogue OF North American Birds Eggs

COMPILED BY
FRANK H. LATTIN,
Assisted by Capt. Chas. E. Beydire, J.
Parker Norris, Esq., and
Capt. B. F. Goss.

It gives the common and Scientific name of every North American Bird according to the A. O. U. Nomenclature. It also gives the A. O. U. Numbers as well as those of both Coues' and Ridgway, and last but not least it gives the value of eggs of *nearly every* species, over one hundred of which never appeared on any printed list before.

It is not a personal catalogue of any one Dealer or Collector, as there is not a Collector in the entire World who has or could furnish all the species whose values are given, and there is not a Pealer who could furnish over from 50 to 5 per cent of the species priced.

The Catalogue is printed on extra quality of paper and contains 53 pages, size $3\frac{1}{4} \times 5\frac{1}{2}$ in.

Price 25 cents per copy. 3 copies for \$1.00.

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Should send two cent stamp to James P. Babbitt, 10 Hedges Ave., Taunton, Mass., for a sample of skin tanned with **Babbitt's Glove Kid Tan**, the cheapest, quickest and best Tan on the market.

A large Catalogue of Naturalists' Supplies, Tools, Eyes and price list of Stuffed Birds and Eggs—2 cents.

James P. Babbitt,
DEALER.

10 Hedges Ave., Taunton, Mass.

THE OÖLOGIST.

Monthly. 50c. per Year.

VOL. X.

ALBION, N. Y., FEB., 1893.

NO. 2

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales." Inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only,*

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" only and according to conditions stated thereon.

DEAR SIR:—I enclose herewith "copy" for an exchange notice which I would like to have inserted in next issue of the OÖLOGIST. I enclose herewith in payment for same 70c. in stamps. I find that an exchange or want notice in your magazine always brings more replies than from any paper I've ever tried. Very truly, THAD. SURBER, White Sulphur Springs, W. Va.

"The exchanges have made me \$25 in cash during 1892" F. B. WELLS, Grinnell, Ia.

LOOK! 150 Youth's Companions, Vol. 8 and 9 copies, Vol. 9 OÖLOGIST, for best offer Bird's Eggs, first-class or Curios. R. W. STRICKLAND, Forestville, N. Y.

32 CAL. revolver, nearly new, to exchange for minerals or Indian relics. J. T. FITCHETT, Beaver Dam, Wis.

FOR EXCHANGE.—Eggs and skins of Eastern birds, and 20 numbers of OÖLOGIST for eggs in sets. W. L. DUNBAR, care Public Library, Bridgeport, Ct.

"By advertising in the OÖLOGIST I have sold my collection of eggs." O. H. BRAUGHLER, Santa Rosa, Calif.

CASH PAID for collections of first-class eggs. PROCTOR & CAMPBELL, Box 441, Hanover, N. H.

FOR SALE for best offer.—28 different eggs all O. K., worth \$3.00 wth data. All letters answered. Address RUFUS J. BRISCOE, 1217 Hawthorne, Minneapolis, Minn.

NOTICE.—First class singles of 521, 701, 129, 73, 152, 227, worth \$1.00 for first-class sets with data. Will sell for \$9. Will exchange or sell separately. J. W. HITT, 155 Broadway, Indianapolis Ind.

OVER 80 copies of 40 different collectors papers and magazines, including 14 numbers of Swiss Cross and Nature's Realm, American Naturalist, Moisit, American Osprey, etc., for best offer of eggs in sets or bird skins. F. L. BURNS, Berwyn, Penn.

RED-Shouldered Hawk, 2 sets of 2 eggs with data and a few fine singles, to exchange for cheap western sets with data. R. C. WOODHOUSE, 135 West 93 St., New York City.

FOR EXCHANGE.—A set of Cooper's books, worth \$5 for sets with data. Singles exchanged for sets with data. J. W. HITT, 155 Broadway, Indianapolis, Ind.

FOR EXCHANGE.—E flat cornet in good condition, 22 rifle for gun or other desirable articles. All answered. JAMES E. MALLORY, Baldwin, Kans.

NOTICE.—I desire to correspond with every ornithologist in this county with a view of extending our observations. MILLARD VAN WAGNER, Gretna, Dutchess County, N. Y.

EXCHANGE.—Copies of *Scientific American* (also Builders' Edition of same) and numerous magazines, for first-class sets with data. Western or southern sets preferred. FRANK H. SHOEMAKER, Hampton, Iowa.

LOON and WOOD DUCK wanted in meat State lowest cash or exchange price. FRANK H. LATIN, Albion, N. Y.

TO EXCHANGE.—A few sets and singles with data to exchange for same. Also a few stamps. Address ALAN PARSHALL, Oberlin, Kan.

I HAVE for exchange an Adding Machine and Davie's Key (cloth) for best offer in U. S. or foreign stamps. FRANK E. SMOUSE, Des Moines, Iowa, Box 835.

WANTED.—Large Ostrich and Emu eggs. Also a few skins. Offer for same pair roller skates, jointed rod and eggs. CHESTER IRVINE, Georgetown, Tex.

WANTED.—Sets of eggs, climbers, caliper, Davie's Nest and Eggs of North American Birds, will give for same singles of eggs, '92's Youth's Companion, and over 500 rare foreign and domestic stamps. Send your prices and get mine. LEROY KING, 394 Forest W., Detroit, Mich.

NOTICE.—We post bills and distribute circulars; send stamped envelope for particulars. GEO. W. VOSBURG, Box 307, Columbus, Wis.

TO EXCHANGE.—50 consecutive numbers *American Field* (1891) in first-class condition, for best offer first-class eggs in sets with data. ALBERT E. McVITTY, Box 107, Bryn Mawr, Pa.

A COLLECTION of Birds Eggs for exchange. To exchange for postage stamps. Write for particulars, and send your list of stamps. C. C. RENSHAW, Boyce, Clarke Co., Va.

TO EXCHANGE.—Western eggs with data also, singles for telescope, large calibre rifle, climbers or first-class bird skins. EDMUND HELLER, 106 Rubeloux Ave., Riverside, Cal. f.

WANTED.—A. O. U. No's. 32 1-1, 125 1-2, 123 1-3, must be first-class with complete data. Will give following first-class singl's, 4, 74, 140, 203, 337, 387, 388, 390, 501, 530. GEO. J. REED, Berlin, Conn.

TO EXCHANGE.—Stamp album and collection, 38s stamps, many rare ones, for sets of 30, 32, 77, 89, with data, or best offer, sets with data. FRANK B. EASTMAN, Easton, Md.

FOR EVERY 30 varieties North American stamps sent me I will give 100 varieties foreign stamps. For every confederate bill 100 mixed stamps. FRANK L. OWENS, Brooklyn, Ia.

WOULD LIKE to exchange photos of natural history subjects for others, also want cheap for cash a 32 cal. Colt's or Smith & Wesson's revolver. GEO. G. CANTWELL, 105 Pikes Peak Ave., Colorado Springs, Colo.

FOR SALE.—A first-class 4x5 Detective camera with time or instantaneous shutter, recessed finder, focusing scale, ground glass and double plate holder. Covered with black seal leather and is in splendid condition. Apply to HENRY R. BUCK, Wethersfield, Ct.

WANTED.—Correspondence for the purpose of exchange with persons interested in Birds or Eggs or having specimens, especially Atlantic and Pacific coasts, Canada or Gulf States. FLOYD MORSE, Ridgefield, Ill.

TO EXCHANGE.—Arrowheads, C. S. A. and state bills, foreign copper coins, rebellion tokens, etc., for Indian relics, coins, paper money, back numbers of *Ornithologist and Oölogist*. ERWIN G. WARD, Palmer, Mass.

TANNING LIQUID, best made, sample bottle sent prepaid for 25c worth of eggs, regular price \$1 per quart. One trial will convince you that it is all I claim it to be. J. E. HOUSEMAN, Aylmer, Ont.

TO EXCHANGE.—Pair of Climbers, set of Taxidermist tools, good books on Ornithology and Oölogy, Spy-glass and Lacrosse racket. Wanted, first-class eggs in sets and books on ornithology and oölogy. GEO. H. ROGERS, JR., P. O. Box 57, Watertown, Wise.

A FEW Foreign and United States coins, minerals, eggs and Botanical specimens to exchange for eggs and plants. Correspondence desired with Southern collectors. DR. W. E. ROTZELL, Narberth, Pa.

FOR SALE.—Studer's Birds of North America, entirely new. Cost \$35, will sell for \$20. Every North American species represented in its natural colors. Enclose stamp for full description of this valuable work. F. W. McCORMACK, care Herald, Florence, Ala.

WANTED.—Birds in the meat. Hawks, Owls, Shrikes, Buntings, Jays, etc., in exchange for 1st class sets with full data. E. B. PECK, 15 Park St., Canandaigua, N. Y.

WANTED.—Strictly first-class singles (large eggs preferred), a pair of strapped climbing irons (new) and a 22 cal. rifle for 1000 U. S. and foreign postage stamps, value \$20. Address R. SANFORD, 17 Cottage street, Rutland, Vt.

LOOK! 275 varieties of postage stamps also 500 mixed. And a fine lot of 1st class single eggs, for a pair of climbing irons, books, papers etc. Address JOHN W. INGALLS, Box 1627, Rockford, Ia.

TO EXCHANGE.—A pair of mounted Bohemian Waxwings. Skins and mounted Prairie Horned Larks, skin of Barred Owl, mounted Fox and Gray Squirrels. Wanted, Barn Owls in the meat. WHIT HARRISON, La Crescent, Minn.

FOR SALE.—Fine sets Sennett's Thrasher 1-4 @ 10c, Curve-billed Thrasher 1-4 @ 10c, Great-tailed Grackle 1-4 @ 10c, Golden-fronted Woodpecker 1-4 @ 10c, Baird's Woodpecker 1-4 @ 25c, St. Domingo Grebe 1-4 @ 20c, Chachalaca 1-3 @ 25c., Amer. can White Pelican 1-2 @ 14c. Orders under \$1.00, 5c. extra for postage. H. C. HIGGINS, Cincinnati, N. Y.

MINERALS.—I wish to get acquainted with mineral collectors from all parts of the world. I have for sale or exchange some fine mineral specimens. I make a specialty of analyzing and naming all kinds of minerals. I have a telescope, scientific books, and pressed flowers of Montana to exchange for minerals or fossils. Send your lists. W. T. SHAW, Bozeman, Mont.

TO EXCHANGE.—Wood's Illustrated Natural History in good condition for best offer of eggs in sets. F. A. PATTON, Drawer 35, Hamilton, Canada.

TO EXCHANGE.—I will give \$1 worth of U. S. or foreign stamps for every egg val. at 25c, have some very fine ones. CHARLES ACEY WHITE, 1513 Leavenworth St., Omaha, Neb.

FRENCH MOSS.—We have just received a new lot from Germany. Dyed bright green in "bricks" 4x4x6 in. All Taxidermists use it and pay 25 per cent more than we charge. Sample package prepaid only 15 cts., 1 doz. prepaid \$1.50. FRANK H. LATTIN, Albion, N. Y.

TIN COLLECTING CAN.—3x4 in. with bale and cover, easily carried in the pocket. Filled with cotton you will find it almost indispensable in lowering specimens from tall trees. Sample prepaid only 12 cts. Larger size 4 1/4x4 in. 15 cts. A soft, drab line on winder to use with either, 8 cts. FRANK H. LATTIN, Albion, N. Y.

HETT PEAT.—An important article used largely by "Bug Hunters" as a substitute for cork. Size 1x1x 1/2 in. Sample sheet 8c., 12 for 25c., prepaid. FRANK H. LATTIN, Albion, N. Y.

FOSSILS, arrowheads, shells and curiosities to exchange for same. GEO. H. DIXON, Waterloo, So. Dak., Lock Box 384.

THE FOLLOWING eggs in sets (Ridgw. Nos.) for others not in my collection. No's 222 1-4, 315 1-5, 264 1-2, 378 1-6, 52 1-2, 3 1-1-4, 7 1-4, 230 1-2, 211 1-4, 13 1-3, 12 1-4, 304 1-3, 63 1-4, 197 1-3, 154 1-2, 214 1-4, E. S. 1-4. CHARLES A. ELY, Perrinville, N. J.

NOTICE.—I have a number of old coins for sale or exchange. Address W. DELONG, 916 Olive St., St. Louis, Mo.

FOR EXCHANGE.—Several 1st class sets of 219, 6, 77, and 390 (A. O. U. No's) for best offer in rubber stamps. Send list. H. S. DAY, Fremont, Ohio.

INDIAN RELICS to exchange for telegraph instrument. Fine war relics to exchange for sets, Indian relics, coins. F. L. ENGLEBERT, Nicetown, Phila., Penn.

TO EXCHANGE. Well polished specimens of Mich. and Fla. Woods for first-class sets with data or first class Indian relics. MORSE HUME, Dearborn, Mich.

WANTED.—Used postage stamps of the present "Columbian" Issue. Will give eggs in singles and sets for same. No posts answered. DR. MARTIN, Wellington, Kansas.

NAPHALINE CAMPHOR MARBLES. A large box of 40 marbles. The neatest and handiest article ever made, to lay around in Specimen Trays, Cases and Cabinets. Said to be a sure preventive against Moths and Insects. Price *prepaid* only 15 cts. FRANK H. LATTON, Albion, N. Y.

TO EXCHANGE.—For first-class singles with data. Part of Maynard's "Birds of E. N. Am." 1st MSS. Premium, March, 1892. ERNEST H. SHORT, Chili, N. Y.

WANTED.—In the meat or fresh skins of Herons, White Ibis, Hooded Merganser, Blue-winged Teal. Will give 1st class sets or part cash if necessary. F. M. RICHARDS, Farmington, Maine.

\$150. Rare Sets and singles including Eagles, Hawks Hummers, &c., and a small stock of Calif. curiosities, to exchange for Bicycle, Revolvers, Guns, Stamps, etc. All ans'd. C. TURTON, Los Angeles, Cal.

TO EXCHANGE.—Four volumes of Youths Companion, August '82 to '86, complete unbound; Paisley style No. 2 climbing irons. A condition, with straps; Davie's Key first edition, paper. Will exchange all or part for first-class sets with data. F. C. WAITE, Sta. B., Cleveland, O.

FOR SALE or EXCHANGE.—Birds Eggs in sets or singles, climbing irons, views of Niagara Falls, (summer and winter) Autoharp, Type-writer, a large Magic Lantern (with views), Air rifle, fine polished and unpolished minerals, Indian relics and mocca-ins, for first-class eggs in sets. Parties having same for sale please send list. Sets of American and Northern Ravens specially desired. H. W. ISAACS, Prospect House, Niagara Falls, N. Y.

NOTICE.—Will be pleased to receive orders for the following first-class eggs, well identified, with complete data, in sets or singles, to be collected this season. Orders filled in turn and filled when eggs are received. Payment on shipment, of which notice will be given. A. O. U. numbers: 111/6, 20, 141/6, 15, 214/6, 05, 2974/6, 35, 390/6, 25, 312/6, 80, 325/6, 35, 370/6, 12, 393/6, 45, 405/6, 10, 113/6, 05, 143/6, 15, 136/6, 125, 474/6, 45, 45, 478/6, 100, 499/6, 05, 500/6, 08, 501b/6, 08, 530/6, 05, 50b/6, 15, 567/6, 05, 580, 581/6, 25, 588b/6, 15, 615/6, 20, 701/6, 05, 719/6, 15, 721/6, 08, 732/6, 10, 735b/6, 20, 743/6, 05, 758/6, 05, Mongolian Pheasant 6/6, 40, 273/15-27 now on hand. Sent *prepaid* on receipt of price. WALTER MITCHELL, 534, Summit Ave., St. Paul, Minnesota.

SCALPELS.—We have a few scalpels worth from 50 to 75c. each, blades are more or less rusty, but not sufficient to injure for use. Will close out at 30c. each, prepaid. FRANK H. LATTON, Albion, N. Y.

BLOWPIPES.—We have a few dozen blowers, all grades from 10 to 25c., that are either imperfect, seconds, or otherwise defective, over one-half of them will work. To close out will send sample for 6c.; 10 for 50c.; 22 for \$1, or 50 for \$2. All prepaid. FRANK H. LATTON, Albion, N. Y.

BRASS BLOWPIPES. We have just received a new lot of blowers and offer them at following prices will remove tip for blowing large eggs, if you wish without extra charge. Prices each: 7in. long 15 cts., 8in. 20c., 10in. 25c., 11in 35c. FRANK H. LATTON, Albion, N. Y.

EXCHANGE.—I have a quantity of bird skins, a mounted grey squirrel and woodchuck, a solid lance wood fishing rod, a good reel, one collecting gun. Will exchange for good rifle, revolver, books on medicine, old s.v. rds or any implements of war used in foreign countries. W. R. BIRD, Mason City, Iowa.

EXCHANGE.—Bald Eagle 6-2 3-1, Buzzard 15-2, 3-1, Cooper's Hawk 2-4 1-2 2-1, American Osprey 40-3 4-4 15-1, Least Tern 50-1 6-2 3-3, Little Green Heron 2-4, 1-3 2-1, Bob White 1-10, 1-12 1-4 1-4 6-1, King Fisher 2-5 1-3 2-1, Bull-bat 2-2 3-1, Barn Swallow 1-6 2-4 1-5 1-3, Bank Swallow 1-4 1-5 1-6n, House Wren 1-6, Carolina Wren 1-4, Crow 3-5 2-4 1-3 1-1, Mourning Dove 1-2n 2-1, Flicker 1-7, 1-6, 1-4 8-1, Grasshopper Sparrow 4-1, Catbird 2-3n's, Robin 1-3, 1-4, Meadow Lark 1-3 1-4n, Wood Pewee 2-3n's, Redwing Blackbird 2-3 2-2, Bronze Grackle 1-3 4-1, Phoebe 1-4n. All eggs 1st class and data. At $\frac{1}{2}$ rates, A. O. U. Cash. F. THEO. MILLER, Lancaster, C.H., Va.

FOREIGN STAMPS and PUBLICATIONS. Special prices to close out. 50 var. 6c.; 100 var. 10c.; 20 var. 40c.; 500 mixed 16c.; 1000 mixed 30c.; 100 *finely mixed* 20c.; 500 *finely mixed* 90c. Philatelists albums, boards and cloth, 16 pages, 2000 spaces, illustrated 24c.; Popular album, for beginners, linen boards, 1200 spaces, 60 pages—illustrated 10c. Merchants Flags of the World, per set 20c. Portraits of Rulers per set 35c. Coats of arms of the World per set, 35c. Standard Color Chart, per copy, 40c. Scott's Catalogue (52d edition) over 350 pages, fully illustrated 35c. Gummed Hinges per 100, 8c. Blank approval sheets, ruled 50 spaces, linen paper, per 10, 8c. Approval sheets each containing 20 var. stamps, 8c. 2d hand International album (6th ed.) with set of Hamburg Locals, 65c. International album (7th edition) 2d hand 65c. All prepaid. FRANK H. LATTON, Albion, N. Y.

EXCHANGE NOTICE.—I have the following first-class eggs, in original sets with full data (A. O. U. No's) for exchange. Great Blue Heron 1-3, Black Tern 1-3 1-2, Noddy Tern 1-1, Sooty Tern 1-1, Arctic Tern 1-3, m. Sparrow Hawk 1-1 1-5, Red-tailed Hawk 1-3 1-2, Am. Long-eared Owl 1-5, Barred Owl 1-1 Caracara Eagle 1-2 1-3, Turkey Buzzard 1-3, Black Vulture 1-2, Bobolink 1-4 1-5, Sora Rail 1-6 1-7 1-8, Virginia Rail 1-7 1-9, Am. Coot 1-6 1-7 1-8 1-9 1-10 1-11 1-12, Florida Gallinule 1-6 1-8 1-9 1-10, Long-billed Marsh Wren 1-1-5 1-6 1-7, Least Bittern 1-4 1-5 1-6, Yellow-headed Blackbird 1-4 1-5 1-6, Black Skimmer 1-5, Meadow Lark 1-3 1-5 1-6, Spotted Sandpiper 1-1 1-5, Bartram's Sandpiper 1-4, Leeches' Petrel 1-4, Ca. tuus Wren 1-1 1-5, Cliff Swallow 1-1 1-5 1-6, Bank Swallow 1-1 1-5, Latton's Est. prices as basis of exchange. CHAS. M. ELI RIDGE, 311 Chamber of Commerce, Chicago, Ills.

MEASURE YOUR NESTS accurately when in the field. For this purpose we have just secured a lot of A No. 1 pencils for taking notes each with a good rubber tip and $\frac{1}{2}$ inch *spring tape* measure—marked in $\frac{1}{16}$ in. on one side and 1-10th meter on the other. The tip and tape can be removed and slipped on any pencil. Sample only 10c., 3 for 25c. FRANK H. LATTIN, Albion, N. Y.

"**THE AUK.**"—I desire at once Volumes No. I, II, IV, V, and VI, also No. 3 of Vol. VIII and No. 2 of Vol. IX of "The Auk." I also desire Nos. 2, 3 and 4 of Vol. VIII (1883) of the "Bulletin of the Nuttall Ornithological Club." I will pay cash or give good exchange. FRANK H. LATTIN, Albion, N. Y.

AMERICAN HISTORY.—I desire, at once, the following books, either new or second-hand. Bancroft's History of the United States. Bin-croft's History of the formation of the Constitution of the Unit-d States. Fiske's American Revolution. Frostingham's Rise of the Republic of the U. S., or any other Standard Works on American History. I will give in exchange, Shells, Corals, Indian Relics, Minerals, Birds Eggs or other curiosities. Send description of what you have to offer and state what you want for the same. FRANK H. LATTIN, Albion, N. Y.

OÖLOGISTS WANTED.—I want copies of Jan.-Feb., 1887 or Dec. 1888 with Jan.-Feb., 1887 attached, and June, 1888 OÖLOGISTS. For each copy of the above publications you will send me before Mar. 1st I will give a copy of the "New Standard Catalogue" or a White Metal Blowpipe or an Embryo Hook or a copy of "Insect Collecting" or 25 cents worth of 1880-1891 or 1892 OÖLOGISTS. FRANK H. LATTIN, Albion, N. Y.

TO EXCHANGE.—Eggs in sets, and singles for eggs in sets. Many common sets wanted. ORA W. KNIGHT, No. 157 Hammond Street, Bangor, Maine.

WANTED.—Breech loading rifle, Double barrel shot gun, Smith & Wesson, Colt or Remington revolver, telescope, field glass, carpenter or painters tools. Will give good exchange in first-class eggs, silverene watch, books, papers, coins, etc. C. BYRON VANDERCOOK, Odin, Ills. Jct

A NNOUNCEMENT TO COLLECTORS.

I take this method of reaching my many patrons, to inform you I have just added to my large stock of BIRDS EGGS and SKINS a fine lot of CORALS, MINERALS, FOSSILS and CURIOSITIES. In each Branch I have a fine assortment and those who have dealt with me in the past, know by experience that my prices are the lowest and stock equal to the best.

The Corals offered for sale are mostly fine Bahama Species.

The Fossils from all over the U. S. Some quite rare, also others very cheap.

The Minerals, include only handsome and desirable varieties, those best suited to the Collector.

The Curiosities are mostly ocean and Florida specimens. I shall soon have a stock of SHELLS.

I have 100,000 Datas for sale at the lowest prices.

If you have not my February list of eggs, send for it at once. Address

WALTER F. WEBB,
Cherry St., Geneva, N. Y.

An Invitation.

At the fifth annual election of the Wilson Ornithological Chapter of the Agassiz Association, held Nov. 20, 1892 the following officers were elected, President, Lynds Jones, Oberlin, Ohio; Vice President, C. C. Maxfield, Danbury, Conn.; Secretary, Willard N. Clute, Binghamton, N. Y.; Treasurer, Reuben M. Strong, Oberlin, Ohio. This Chapter is rapidly taking its place among the foremost of American ornithological societies. By a system of co-operative correspondence the members are able to accomplish much more than would be possible if working alone. In four years the membership has grown to one hundred and fifty, about equally divided into Active and Associate classes. The Active members have entire control of the Chapter. A new constitution has been recently adopted and the new methods it embodies puts the Chapter on a sound working basis and will enable it to make a much greater growth. In 1893 it is expected to award several prizes to the members making the best progress in Ornithology. The Chapter also provides for the publication of all reports made by the members.

In order to accomplish the best results, the Chapter desires to have the name of every American ornithologist on its roll of membership, and all readers of the OÖLOGIST who wish to join are requested to address the President or Secretary. A copy of the new constitution and other matter explaining the Chapter will be sent to all who apply for it. Everyone who wishes to advance American ornithology should be in this Chapter. The next election of members occurs in March.

STRAWBERRY PLANTS, ASPARAGUS ROOTS, SEED POTATOES.

I have choice plants of twenty leading varieties of Strawberries, Tips of the Ohio Raspberry, Extra Fine 2 year old roots of Barr's Mammoth, Palmetto, and Conover's Colossal Asparagus and Fifty selected varieties of Seed Potatoes. Will sell at low rates, or will exchange for desirable Eggs, specimens or Books in Natural History.

FRANK H. LATTIN,
ALBION, N. Y.

Our Annual Offer

**We quote the following Liberal Offers until March 1st,
ON EGGS OF THE FOLLOWING SPECIES.**

Orders of 50c. or over sent prepaid, under that amount 5c. must be added for postage and packing.

For \$1.00 you can select Eggs to the amount of \$1.50
 " 2.00 " " " " 3.50
 " 3.00 " " " " 6.00
 " 5.00 " " " " 11.25
 " 10.00 " " " " 25.00

This offer will hold good until March 1st and is doubtless the only chance to obtain eggs at so low a rate of us during 1893.

All specimens will be carefully packed in strong tin or wooden boxes and sent at purchaser's risk by mail, or at our risk and purchaser's expense by express.

SECOND-CLASS SPECIMENS can be furnished of most of the species at one-half the price of a first-class one. Parties ordering second-class Eggs must name a list of extra Eggs to be used as substitutes.

SETS. We can furnish sets of species preceded by *,

A **POINTER**.—Collectors well know how readily they can exchange some cheap erg. not found in their locality with local collectors for specimens worth many times as much. Many wide-awake collectors will doubtless lay in a large supply for this purpose.

I might add that if your collections are in need of any species included in offer, an opportunity to purchase at so low a rate may *never* occur again.

Address Frank H. Lattin, Albion, N. Y.

American Eared Grebe	\$	15	Wilson's Phalarope	75	*Flicker	
*St. Domingo Grebe		50	*European Snipe	25	Red-shafted Flicker	10
Pied-billed Grebe		10	*Bartramian Sandpiper	35	Nighthawk	40
Murre		20	*Spotted Sandpiper	15	Texan Nighthawk	40
*California Murre		20	Curlew	100	Chimney Swift	12
Skuia		50	*Lapwing	15	*Ruby-throated Hummingbird	
Parasitic Jaeger		50	*Killdeer	20	bird	50
Herring Gull		20	Bob-white	10	Costa's Hummingbird	75
American Herring Gull		20	*Florida Bob-white	15	Anna's Hummingbird	50
Mew Gull		25	Texan Bob-white	10	Scissor-tailed Flycatcher	10
Franklin's Gull		25	Chestnut bellied Sealed		Kingbird	03
Royal Tern		40	Partridge	35	Arkansas Kingbird	06
Cabot's Tern		40	California Partridge	10	Crested Flycatcher	12
Forster's Tern		10	Valley Partridge	20	Phoebe	04
Common Tern		08	*Ruffed Grouse	15	Say's Phoebe	15
Arctic Tern		10	Willow Ptarmigan	100	Black Phoebe	15
*Least Tern		08	Rock Ptarmigan	100	Wood Pewee	12
*Sooty Tern		25	*Chachalaca	75	Western Wood Pewee	20
Bridled Tern		100	*White-crowned Pigeon	100	Western Flycatcher	20
Black Tern		10	*Mourning Dove	03	Acadian Flycatcher	15
*Noddy		50	*White-winged Dove	20	Little Flycatcher	25
*Fulmar		75	Mexican Ground Dove	50	Trailor's Flycatcher	15
Stormy Petrel		50	Cooper's Hawk	30	Prairie Horned Lark	15
*Yellow-billed Tropic Bird		20	Red-tailed Hawk	50	Desert Horned Lark	20
*Booby		175	Red-shouldered Hawk	35	Texan Horned Lark	30
Gannet		35	Fla. R. dsh'd Hawk	75	American Magpie	15
Cormorant		50	*American Sparrow Hawk	20	Yellow-billed Magpie	35
*Double-crested Cormorant		25	*American Osprey	50	*Blue Jay	01
*American White Pelican		35	American Long-eared Owl	35	Florida Blue Jay	25
*Man-o'-war Bird		100	Screech Owl	50	California Jay	20
American Merganser		150	Florida Screech Owl	50	*American Crow	05
Red-breasted Merganser		75	Texan Screech Owl	50	Florida Crow	35
European Teal		20	California Screech Owl	50	Fish Crow	35
Green-winged Teal		50	Great Horned Owl	100	*Starling	10
*Blue winged Teal		20	*Burrowing Owl	15	Cowbird	03
Canvas-back		125	Gro-be-willed Aini	100	Dwarf Cowbird	10
Barrow's Golden-eye		100	*Yellow-billed Cuckoo	15	Red-eyed Cowbird	10
Ruddy Duck		35	Black-billed Cuckoo	15	*Yellow headed Black-bird	03
American Flamingo		100	Belted Kingfisher	20	Red-winged Blackbird	02
American Bittern		75	Hairy Woodpecker	50	*Bicolored Blackbird	10
*Least Bittern		20	Southern Hairy "	100	Tricolored Blackbird	15
Great Blue Heron		25	Harris's Woodpecker	75	Meadowlark	10
Reddish Egret		35	Downy Woodpecker	20	Western Meadowlark	10
Little Blue Heron		12	Gardiner's Woodpecker	50	*Orchard Oriole	06
Green Heron		12	Red-cockaded Woodpecker	100	Baltimore Oriole	06
*Blk-crowned Night Heron		12	Baird's Woodpecker	100	*Bullock's Oriole	10
Limpkin		75	Red-headed Woodpecker	68	*Brewer's Blackbird	03
Virginia Rail		20	Californian Woodpecker	40	Purple Grackle	05
Sora		10	Loy's Woodpecker	35	Florida Grackle	10
*Florida Gallinule		10	Red-billed Woo pecker	25	*Bronzed Grackle	05
*American Coot		08	Golden-fronted Woodpecker	50	Bronzed-tailed Grackle	15

Boat-tailed Grackle	15	Tufted Titmouse	35	Redshanks	50
*House Finch	05	Texan Tufted Titmouse	75	Common Sandpiper	25
Redpoll	35	Chickadee	12	Great Snipe	1 50
*American Goldfinch	05	Oregon Chickadee	35	Common Snipe	40
Western Goldfinch	10	Carolina Chickadee	15	Water Rail	50
*Arkansas Goldfinch	10	Carolinian Bush-Tit	15	White-fronted Goose	1 00
Lawrence's Goldfinch	20	Blue-gray Gnatcatcher	20	*Moorhen	15
Ch'stn't-collared Longspur	35	Western Gnatcatcher	50	Sheldrake	25
Vesper Sparrow	05	Wood Thrush	06	Black-headed Gull	20
Western Vesper Sparrow	15	Wilson's Thrush	12	PHILLIPINE EGGS.	
Oregon Vesper Sparrow	25	*Russet-backed Thrush	15	Black-headed Weaver-bird	50
Savanna Sparrow	10	Olive-backed Thrush	25	" " "	
Grasshopper Sparrow	20	Hermit Thrush	30	2nd class	15
W. Grasshopper Sparrow	20	*American Robin	03	Bul-bul	75
Lark Sparrow	05	Western Robin	10	" 2nd class	25
Western Lark Sparrow	05	*Bluebird	02	Sun Bird	2 00
*Gambel's Sparrow	15	Western Bluebird	12	Chinese Oriole	1 00
Chipping Sparrow	02	Mountain Bluebird	12	MISCELLANEOUS.	
Field Sparrow	03	English Sparrow	20	Gopher	35
Slate-colored Junco	20	FOREIGN EGGS.	40	Skate	05
Black-throated Sparrow	35	Lesser Kestrel	25	Shark	
Song Sparrow	02	Sparrow Hawk	50	Devil-Fish	10
Desert Song Sparrow	35	Marsh Harrier	50	Hammerhead Shark	15
Heermann's Song Sparrow	10	Hen	50	Nurse Shark	75
Samuel's Song Sparrow	05	Montagne's "	1 00	Egg case of Periwinkle	25
Swamp Sparrow	12	Swallow	10	Fossil Fish Eggs, per 12	10
Towhee	10	Nuthatch	30	Crocodile	1 00
Spurred Towhee	20	Wren	20	Mud Turtle	10
Oregon Toxee	25	Fire-crested Wren	50	Musk Turtle	15
California Towhee	10	Sedge Warbler	15	Snapping Turtle	15
*Cardinal	05	White-throat	10	Eineu (Hole in end)	2 50
Texan Cardinal	25	Golden-crested Kinglet	30	Ostrich (Hole in end)	2 00
*Rose-breasted Grosbeak	10	Whinchat	20	(If sent <i>prepaid</i> 25c. must be included to pay charges on last two eggs.)	
*Black-headed Grosbeak	15	Wh-spotted Blue-throat	25	Hummingbird nests 10 to 50c each according to condition and beauty.	
Blue Grosbeak	20	Brambling	15	Can also furnish nests of about 50 species at from 10c. to \$1 p-r nest.	
Western Blue Grosbeak	25	Missel Thrush	05	ENGLISH BIRD SKINS.	
Indigo Bunting	08	*Song Thrush	05	We have on hand a few En- glish Bird Skins and have con- cluded to include them in our "Annual Offer" to close them out. We have only one or two skins of a species, so <i>always</i> name substitutes.	
Lazuli Bunting	20	*Blackbird	05	Sparrow Hawk	1 00
Painted Bunting	10	Dipper	15	English Jay	1 00
Dickiessel	05	Golden Oriole	1 00	Dove	1 00
Lark Bunting	25	Pied Flycatcher	1 00	Starling	50
Scarlet Tanager	25	Red-breasted Flycatcher	1 00	Kingfisher	1 00
Summer Tanager	25	Red-backed Shrike	1 00	Nightingale	75
Purple Martin	12	*Jay	1 00	Bullfinch	40
*Clif Swallow	03	Magpie	1 00	Yellow Hammer	40
Barn Swallow	05	*Jackdaw	1 00	Red-wing Thrush	45
Tree Swallow	15	*Greenfinch	20	Skylark	40
*Bank Swallow	03	House Sparrow	05	Sparrow	35
Cedar Waxwing	10	Bullfinch	1 00	Robin	40
*Phainopepla	35	Siskin	1 00	Swift	65
Loggerhead Shrike	68	Lesser Redpoll	1 00	Chaffinch	35
White-rumped Shrike	08	Crossbill	3 00	Goldfinch	45
California Shrike	08	White-winged Lark	50	Greenfinch	40
Red-eyed Vireo	10	Calandra	20	Linnet	35
Warbling Vireo	15	Short-toed Lark	20	Great Tit	40
Yellow-throated Vireo	25	Green Woodpecker	1 00	Wren	40
White-eyed Vireo	15	Gt-Bk backed	1 25	Black-cap Warbler	50
Bell's Vireo	15	Cuckoo	1 25	Whinchat	40
Prothonotary Warbler	25	Cirl Bunting	1 25	Wheatear	40
Blue-winged Warbler	1 50	Yellow Bunting	1 25	Stonechat	30
Yellow Warbler	65	Black-headed Bunting	1 25	Pied Wagtail	40
Magnolia Warbler	50	*Chaffinch	1 25	Tree Pipit	35
Black Poll Warbler	75	Hedge Sparrow	1 25	Lark	45
Prairie Warbler	20	Willow Warbler	1 25	Rock Ptarmigan	35
Louisiana Water-Thrush	50	Italian Sparrow	1 25	Hedge Warbler	35
Maryland Yellow-throat	12	*Red-breast	1 25	Willow Warbler	50
*Yellow-breasted Chat	08	*White-throat	1 25	Song Thrush	50
Long-tailed Chat	15	Common Bunting	1 25	Blue Tit	35
American Redstart	1 00	*Ring Dove	1 25	Ring Plover	50
Dipper: Onized	15	Turtle Dove	1 25	Fieldfare	50
Mockingbird	05	Peacock (wild)	1 25	Black-headed Gull	50
*Catbird	08	Guinea Fowl	1 25		
Brown Thrasher	03	Partridge	1 25		
Sennett's Thrasher	15	Quail	1 25		
*Curve-billed Thrasher	15	*Red-legged Partridge	1 25		
California Thrasher	20	*Barbary Partridge	1 25		
Cactus Wren	12	Capercaillie	1 25		
Bewick's Wren	25	Rock Ptarmigan	1 25		
Vigor's Wren	25	Bartmannian Sandpiper	1 00		
Baird's Wren	25	Buff-backed Heron(2 small holes in side)	1 00		
House Wren	05	Bittern	1 00		
Western House Wren	08	Gt-White Heron	1 25		
Long-billed Marsh Wren	05	Spotted Redshank	2 50		
White-breasted Nuthatch	35	Curlew	50		
Brown-headed Nuthatch	25				

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NO. 2

The American Osprey.

BY DR. MORRIS GIBBS.

"Soon as the sun, great ruler of the year,
Bends to our northern clime his bright career,
And from the caves of ocean calls from sleep
The finny shoals, and myriads of the deep.
When freezing tempests back to Greenland ride,

And day and night the equal hours divide:
True to the season o'er our sea beat shore,
The sailing Osprey high is seen to soar."

These true and expressive lines are credited to Alexander Wilson, the great ornithologist, and are ample evidence of true poetic thought, and of the naturalist.

The Osprey or Fish-hawk is known throughout the length of our eastern seaboard, and how much further north I am unable to say. I have observed it, apparently as much at home in southern Florida as on the shores of New England. It not rarely spends its summers in the interior, and in widely separated localities, being unknown in intervening regions of vast territory. The Mississippi evidently offers an inducement as a route for migration north from the Gulf, as is shown by its not rarely appearing in the vicinity of the tributaries of the big river. It nests in Michigan, and that too in the interior of the state, although it is more common about the shores of the great lakes.

No one who has watched the habits of the Fish-hawk, can fail to take an interest in the noble bird, and there are few indeed, aside from the meddler, who will do an injury to this pleasing attendant of the fisherman. At the north it is looked upon as a harbinger of the season of plenty, and the fishing population almost regard it with superstition.

"She brings us fish; she brings us spring;
Good times, fair weather, warmth and plenty;
Fine store of shad, cod, herring, ling,
Sheep-head and drum and old-wives dainty."

Thus runs the old song, and undoubtedly the hardy fishers were cheered at the reappearance of pleasant weather and good times, together with this winged messenger. Think of the joy of spring, and the pleasure in securing ample hauls of fish. Again they sing.

"The Osprey sails above the sound.
The geese are gone and the gulls are flying.
The herring shoals swarm thick around,
The nets are set and the boats are plying."

In Michigan, and in fact throughout the interior, the Osprey is so little known that the habits can rarely be studied, and it is only on the seaboard that the species is abundant. In all, not too well settled districts along our Atlantic coast, Fish-hawks may be found in season, the Maine shore-line being favored with their presence seven months or more, while further south the graceful fishers are found proportionately longer, and in Florida through out the year.

This bird, nearly allied to the Eagles, is a very industrious creature, and unlike the so-called noble bird, the Bald-headed Eagle, it never feeds on putrid flesh. The Bald-headed Eagle, the unfortunately selected emblem of our country, which regales itself on dead fish, which it finds on shore, also has the censurable habit of robbing its cousin the Fish-hawk of its honestly acquired prey. Watching from afar, the Eagle hastens towards the successful Osprey, as soon as it ascends from the surface with its catch. The fortunate, or we might say unfortunate bird, perceiving its pursuer, mounts into the air and endeavors to escape. Up, up they go, and often appear like mere specks before the pursuit is finished. It always appeared odd to me that the Fish-hawk does not attempt to escape by a straight away flight, as in that case

the weight of the fish would not retard the progress as much as in an upward sweep. However, in all instances that I have read of and seen, the invariable effort at escape by the burdened Osprey, is in upward flight; and too, the end is always about the same. The Eagle below moves in majestic circles, rapidly revolving about the struggling handicapped Fish-hawk, which vainly endeavors to save its fish by furiously flapping its wings in an effort to escape. At last, when the Eagle is on a level with the fatigued fisher, the fish is dropped in sheer desperation, as otherwise the Eagle would have pounced upon the industrious bird. As soon as the bird has dropped the fish it can easily escape. The Eagle too, ceases its persecution and flies off, apparently content with the mischief it has done. I have read in descriptions of this contest that the Eagle would drop like an arrow, when the fish was released, and catch it in mid-air before it reached the water. This act I have never seen performed, and shall never credit it till I have seen it. I do not think that the act is usually performed because the Eagle is in want of food, for I have never yet heard of the Eagle's visiting the dead fish after it had fallen. It may be thought that the Eagle is awaiting for the fish to become putrid before visiting it. Still I think that the act of chasing the successful Fish-hawk is one of pure wantonness. I am positive that the Osprey never reclaims the fish, whether it falls on land or water. Sometimes, where a Fish-hawk secures a fish as heavy as three pounds in weight, the Eagle gains so rapidly upon it that the chase is short, and again, when only a small fish is secured the birds will nearly pass out of sight before the silver streak is seen which marks the descent of the contested fish.

The general make up of the Osprey's plumage is much like that of the King-fisher, that is, in its resistance to the

water and the skin much more nearly resembles that of the ducks, than the other Hawks and Eagles. It is, not rarely, completely submerged when it is after a fish, and I have seen it remain under water all of fifteen seconds when grappling with a prize. The main means for securing the prey, are undoubtedly the very large and strong talons, and it may be doubted if the beak is ever used when the quarry is attacked. I have watched the Osprey when it was fishing and can say that its luck varied greatly according to the run of fish or whether they were near the surface or well below it. I have repeatedly seen fish secured when the Hawk barely seemed to touch the surface, and again the bird repeatedly failed, even after going completely below. Like the attempts of the King-fisher, the efforts of the Fish-hawk are largely failures, but I cannot give the percentage of successful plunges. It is a grand sight to witness a capture:

With broad unbending wing, and circling slow,
Marks each loose straggler in the depth below;
Sweeps down like lightning, plunges with a roar,
And bears his struggling victim to the shore."

A Summer Ramble.

How beautiful doth Nature appear to us, as we lightly step from the city borders into the verdure of the farmer's crops!

Proceeding on our way, thro' forests clad in vernal splendor, we hear the pleasing notes of the Oriole. On the edge of the forest we see the swaying nest of these liberty loving creatures. As usual it is built in an elm tree, and so situated as to be almost inaccessible.

High in the air, the swallows are flying in circles, and their sharp chatter, as they chase one another, appeals very unsatisfactorily to the ear.

We now wend our way o'er the dusty road, then thro' pastures green and fair. Above us, the ethereal sky of blue,

forms a canopy wrought by the Master Hand. Overhead flies the Meadow Lark, while its patient mate, lover-like, watches o'er the brood. Occasionally we hear its plaintive notes, which always inspire the writer with a feeling of sadness. It seemss as if the birds have a language, which we are privileged to study and even to understand.

Resuming our walk, we suddenly come upon a nest containing three eggs which we identify as those of the Swamp Sparrow. What happiness is ours, for it is the first set of this species we have ever discovered. We press onward imbued by new hope, and are rewarded by sets of Morning Dove, Robin, Catbird, Yellow Warbler, Cedar Waxwing, Blackbird and Purple Grackle.

Are we proud of our day's success? Ask the young Naturalist for he can answer. Grateful are we that ours has been the great privilege of becoming better acquainted with our friends, the birds.

Ah, friend, if thou wouldest Nature understand.
Commune with her, yes, go forth hand in hand:

Translate the songs her feathered children sing,
So shall thy life be but continued Spring.

WILHELMINE A. STARK,
Buffalo, N. Y.

Some Sparrows in Minnesota.

The following observations were all made within a radius of thirty miles about Minneapolis, Minn.

One of our rare migrants is the Leconte's Sparrow, but I have had the good fortune to take two specimens and have seen twenty more. My birds were all seen in the long dry grass in the meadows. As I walked through the grass they would rise at my very feet and fly straight as an arrow for a few yards and then drop down. Here they would creep some distance and it would take a good deal of stamping about in the immediate vicinity before

they could be flushed again. Where one was found there were generally several more.

The Lark Finch comes about the middle of April and like the Vesper Sparrow he haunts the fields and road-sides. His song is not one to be despised, and perched upon a fence or clod of dirt he loves to sing away the late afternoons when the bird chorus from the groves has grown faint.

He builds his nest on the ground in the fields, or very often on the grassy banks along the road or by the side of a foot-path. I have found a nest placed in the cinders and chips between the two tracks of a double-tracked railway. I have seen a nest in a sloping sand-bank within fifty yards of a large grain elevator within the heart of the city, and also one within a few feet of a base in a ball ground. In fact they seem to enjoy a place where their eggs are liable to be stepped upon. All the nests that I have found have been lined with black horse hair and contained four or five eggs.

Harris's Sparrow is not a very rare migrant. Just at that time when the migrating Warblers pass through and there is an abundance of birds everywhere, single birds or small flocks may be found fitting along the hedges that border the roads or divide the fields. He also has a great affinity for plum groves.

He is very conspicuous on account of his contrast in colors and is quick of movement being almost continually on the hop.

The majority of them remain but three or four days, though an occasional bird may be seen eight or ten days after they arrive.

The White-crowned Sparrow is not a very common migrant and can be found in company with the White-throated Sparrow though he arrives somewhat later.

The White-throated Sparrow comes

through in a regular tide. You will find him anywhere and everywhere, in brush-piles, hedges or groves. He remains long but does not breed. I have often heard his well-defined but tremulous whistle on a clear Spring morning from the top of some tree in the midst of the city.

The Clay-colored Sparrow is not so well known about here as it might be, though quite common. It resembles very much the Chipping Sparrow. It lacks the chestnut on the head and has a little longer tail, but when one has once taken a specimen he will not fail to recognize it at some distance. Unlike the Chipping Sparrow he does not show that confidence in humanity, but inhabits the fields such as contain weeds, as milk weed and mullen, or he may often be found about brush-piles.

A nest that I found was placed in a tussock of grass and raised about half a foot from the ground. It was composed of grass, but did not contain, as a Chipping Sparrow's does, a lining of hair.

The Swamp Sparrow can be found in large numbers in the bushes, flags and grass that skirt the edge of our marshes, and I have even seen it in high dry woods in the migrations. I would list them as being as abundant as the Song Sparrow, but not so well known on account of their habits. Although on long acquaintance with them I have never yet heard a song that I positively knew was a Swamp Sparrow.

Their nests are built in the long grass and weeds, generally where it is damp or on that line where the water begins to creep up in the grass. It is placed in some tussock and raised a few inches from the ground and is composed of grass and weeds. The birds do not often fly from the nest, but jump down and creep along for some distance, and so swiftly do they go that at first glance at one running through the grass in this manner I often get the impression

that it is a mouse. Sometimes several nests are found within a few yards of each other.

The Fox Sparrow, that handsomest of Sparrows, is a tolerably common migrant here. You will find him in the thickest of groves, and you may see him on some April day flitting across the road, here and there, from thicket to thicket. He is not so sociable as other birds and although he may come North with a few companions he loves solitude better. No song that I have yet heard from any bird throat has given me so entrancing an effect. He sings but seldom and then, from the top of some tree, with head thrown back and swelling throat, as if for his own happiness alone. He gives utterance to notes, remarkable for their sweetness, harmony and variety.

H. M. GUILFORD,
Minneapolis, Minn.

Collecting in Chicago.

When an oölogist sets out for a trip, when he finds himself face to face with nature, I doubt whether there is room in his heart for ought but the purest feelings. He is filled with exultant hope his step is buoyant, and life seems a pleasant song. He strays through shady depth, over sun-kissed fields, he stoops to drink from whispering brooks or cool springs, and again he waddles through mud cheerfully. And his time is well spent.

Whenever I pick up the OÖLOGIST and follow the writers through the various scenes and events a host of pleasant memories crowd upon me, and I always feel like joining the circle and take my turn, so here it goes.

In the Calumet region, within the limits of the World's Fair City there is a stretch of wet prairie you might call it, bounded by railroads, woody ridges and manufacturing suburbs. There are patches of rushes connected by

narrow necks of the same growth the rest is wild prairie grass, while here and there are clumps of willows to break the monotony of the waving expanse. This year the flood had made its way everywhere and the feathery tribes were safe here, save from the oölogist. In spite of a section hand's warning call, "ye'll, dthrown," I made my way in water to my hips. I knew that in muddy places I would only sink so far. My experience goes to prove that the whole Calumet region is underlaid with hard sand which except in Mud Lake and the vicinity of Calumet river is at most only three feet down, in most places not that. The shell in this strata goes to prove that this was once a shallow from Lake Michigan. This gave a feeling of security which was not without importance.

In the rushes the Least Bittern fairly swarmed this year. I am sure that I found more than fifty of their nests in the few times I was there. Only a limited number of sets however, were fresh enough to collect, the trips were made during the first half of July. The nests were platforms of rushes and grass, and sometimes scouring rushes; the great majority measured seven inches across, in fact, this was almost invariable; and they were placed all the way from the water to three feet above it. The favorite location did not seem to be in the most tangled places in the rushes but near the grass where it was tolerably open; here they would often nest within a few yards of each other. The birds would rise and fly off a short distance as I neared the nest in no instance did one "sit close." Often the two were near the nest together, indeed, quite regularly. When a bird rose with ruffled neck and croaking I was sure to find young ones, downy little fellows with large round, scared eyes, their long bills open for flight. The complement of light blue eggs ranged from three to five, commonly

four, and I found one set of six. Occasionally the big lazy cousin of the Least Bittern, the American Bittern, could be seen. I took one set of five fresh drab colored eggs of this latter bird; it sat close and flew far when it rose. The nest was a bulky platform of rushes on the water and placed rather openly. I need hardly state that this find made me feel good all over. As a coincidence, I might say that near this nest was one of the Least Bittern, and that the very next day I found another nest of the American Bittern containing one egg within three rods of the first. The second was like the first and they both measured about one foot across.

There were many other birds represented on these grounds. It goes without saying that the Long-billed Marsh Wren was even more abundant than the Bitterns, the whole region teems with them, and they raise a ceaseless chatter wherever you turn, and you may stick your finger into the opening at the side of their little house and feel the little lumps of chocolate.

I found two deserted nests of Albinos. There is poor chance for seeing the bird leave its nest, nay, when you see him he is eyeing you sharply first with one eye and then with the other, tail perpendicular, scolding with all his might. Who blames him? I also found belated nests of Pied-billed Grebe, King Rail, and Florida Gallinule. The flood was to blame for these. And at one end of my ground the female Wilson's Phalarope followed me in circles quawking and craning her neck. Here the grass was short as a result of pasture; yet the flood was there too. I found no nest. I know from former experience that you might as well say that the nest is within a circle of a half a mile and arrange your plans accordingly; if you fool the bird to give the nest away you must be very sharp.

Everywhere I waded I was followed

by the Black Terns uttering their shrill angry note which they emphasized as they dove at my head. Their young were swimming about in the grass. I caught one downy little fellow which I of course had to examine before I let him go, and there was a corresponding anxiety in the angry notes overhead. At first those fellows vexed me, but soon it seemed to blend with the scenery. It was entirely too late for eggs yet I found one set of two fresh ones, probably the flood had succored me by destroying the first nest of this pair. The ground color is yellowish green; they are thickly spotted with dark brown and some lilac. The brown forms a broad wreath near the larger end of one. The nest was a slight depression at the top of a semi-floating mound of dead rushes and mud openly situated. There was a slight attempt to line the resting cavity with some grass. In my experience of a former year I found that the nests are all openly situated, sometimes they are of the above description and sometimes they are broken down Musk Rat houses. I found that the ground-color of the eggs varies from brownish to quite green and that there is liable to be a wreath at the larger end of a good many of the eggs, rather lower than is common in smaller eggs. In the majority of cases I found but two eggs in a nest, only once or twice did I find three.

JOHN LARSEN.

Scientific Osteology for Amateurs.

Being interested in the study of osteology I read with much interest the article in Nov. '92 OÖLOGIST relating to this branch of science. Having noticed a few points that I think can be greatly improved upon I will endeavor to give the process used by scientific workmen.

Now let us suppose that we have just returned from a hunt through the

wood lands and among our game we have a fine Blue Jay. We will not preserve the skin, but the skeleton.

The first thing an amateur would be likely to do would be to strip off the skin and rough flesh, dump the bird in a kettle and boil it until the flesh would all come off.

Ah, but this is wrong, vastly wrong for by so doing you boil the grease and fat into the bone and no human agency can ever remove it—Not even the hot rays of the tropical sun would bleach it, and forever after your skeleton is of a dark greasy color. The only true way is to lay the specimen before you on a table and with a sharp scalpel or knife remove the skin and all the flesh possible, then lay the skeleton away until it becomes thoroughly dry and hard. Meanwhile take a small wooden box, fill it half full of fine sand, this we will lay away for future use.

Now if the flesh has become dry and hard put the skeleton in a dish and pour on water enough to cover it all over. Let it remain in this until it is softened and the muscles and ligaments are as pliable as when fresh. You will find by drying and soaking that the blood has coagulated thus making the flesh more compact so that when we come to scraping we can remove large pieces at a time and can clear the skeleton much quicker.

Now comes the hardest part of all; little by little we must scrape away until every particle of the flesh is removed, taking great care not to injure the ligaments that connect the bones, for we must keep them all connected just as they originally were so as to know the exact location of the different parts in life.

Doubtless the average amateur could not clean the entire skeleton at one time so we will lay it aside but it must not be allowed to dry again until finished so we will take the box before described and pour water on the sand

until it is thoroughly dampened. On this lay the skeleton until time can be found to complete the scraping process.

Supposing the bones now to be all nicely scraped and cleaned we will proceed to bleach and mount them, for no skeleton is fit for a cabinet until every bone is as white as chalk. The best known method for bleaching is to take an earthen dish pour in $\frac{1}{2}$ gal. of boiling water and to this add $\frac{1}{4}$ lb. of chloride of lime and $\frac{1}{2}$ lb. of common washing soda, allow this to stand in a dark room until cold and then place your skeleton in it being sure that every part is covered, after five or ten minutes take it out and brush in cold water.

At first the bones will not look much whiter than before but when Nature has performed her part you will be satisfied. As soon as the water has dried off the skeleton is ready to mount on a temporary perch.

In the base of the perch drill a small hole and in this fasten a wire of sufficient size to firmly hold the skeleton in place. With one hand hold the skeleton on the perch to just the height you think it should come and fasten the other end of the wire securely to the back bone then bring the feet down on the perch and pin them in place, bring the wings in shape and tie them, crook the neck in the right position and set the specimen in the sun to dry.

In a few days you will find the bones all firmly dried together and bleached white as snow.

Now it is ready to be fastened on its stationary perch and be placed in the cabinet.

All small birds and animals are cleaned in this way. It is a slow process but when you have your first specimen nicely finished you are not ready to stop. A fine skeleton is of more scientific value than a dozen skins. Let us study first bones and muscles, then feathers.

KIRK B. MATHEWS.

A Collection of North Carolina Birds Eggs.

THOS. A. SMITHWICK.

47. Prairie Warbler. 673.

Set a. Walke, N. C., May 10, 1892. Nest of grass, reed leaves, bits of spider webs, etc., lined with hair and feathers, placed $2\frac{1}{2}$ ft. up in forks of small maple bush. 4 fresh eggs, .70x.48, .67x.49, .67x.48, .66x.51.

Set b. Raleigh, N. C., June 10, 1892. Nest 2 ft. up in sweet gum. 4 eggs, medium embryos, .61x.49, .62x.48, .62x.50, .65x.49.

48. Oven-bird. 674.

Set a. Walke, N. C., May 19, 1892. Nest of skeleton leaves, pine straw and fine grass, lined with hair and fine leaves, placed in shallow hole in the ground on hill near swamp. 4 fresh eggs, .75x.63, .74x.63, .73x.61, .74x.61.

Set b. Weaverville, N. C., May 15, 1882. Nest oven shaped, of leaves and grasses, on hillside. 4 fresh eggs, .76x.59, .78x.60, .78x.60, .77x.60.

Set c. Weaverville, N. C., May 20, 1891. Nest at root of small sapling, composed of grasses, leaves, etc. 4 eggs, incubation begun, .80x.61, .77x.62, .77x.61, .76x.59.

Set d. Weaverville, N. C., May 10, 1892. Nest of leaves and lined with fine grass. 3 fresh eggs, .81x.60, .78x.59, .77x.59.

49. Louisiana Water-Thrush. 676.

Set a. Walke, N. C., April 22, 1892. Nest of leaves taken from mud and coarse grass, lined with finer grass, a little moss and a few very fine black roots, imbedded in side of a mossy bank, 1 ft. above small stream of water in a swampy place. 3 fresh eggs, .78x.58, .77x.58, .78x.60, .77x.59.

Set b. Raleigh, N. C., May 27, 1892. Nest 1 ft. high in side of branch. 5 eggs, .78x.59, .79x.58, .77x.59, .82x.59, .79x.58.

50. Maryland Yellow Throat. 681.

Set a. Weaverville, N. C., June 1, 1891. Nest in meadow, placed in branch of goldenrod and composed of leaves and grasses. 3 fresh eggs, .71x.53, .67x.53, .66x.50.

51. Yellow-breasted Chat. 683.

Set a. Raleigh, N. C., May 28, 1891. Nest 3 ft. high in briars, of dead leaves, lined with grass. 3 fresh eggs, .86x.63, .87x.64, .88x.60.

Set b. Raleigh, N. C., June 6, 1892,

Nest 2 ft. high in bushes. 3 eggs, small, soft embryros, .87x.67, .89x.67, .88x.67.

Set c. Weaverville, N. C., May 30, 1892. Nest in small bush 4 ft. up, of grasses and lined with fine rootlets. 4 eggs, incubation slight, .84x.64, .79x.63, .85x.66, .82x.64.

Set d. Foot of Craggy Mountain, N. C., May 23, 1892. Nest in briar patch 2 ft. from ground. 3 fresh eggs, .87x.64, .82x.63, .84x.62.

52. Hooded Warbler. 684.

Set a. Walke, N. C., May 18, 1891. Nest of reed shneeks, leaves, etc., fastened with spider webs, lined with fine grass and a fine black moss, 3 ft. up in forks of small bush. 4 eggs, rather large embryros, .72x.49, .71x.49, .70x.49, .70x.49.

Set b. Walke, N. C., May 16, 1892. Nest of strips of bark, grass and a few leaves and pine straws fastened together with spider webs, lined with a fine black moss, placed 2 ft. up in forks of a small, bent myrtle bush. 3 fresh eggs, .67x.52, .70x.53, .71x.53.

Set c. Walke, N. C., May 11, 1891. Nest $\frac{1}{2}$ ft. up in clump of alder bushes. 4 fresh eggs, .67x.53, .70x.53, .66x.53, .66x.53.

Set d. Walke, N. C., June 2, 1891. Nest $\frac{1}{2}$ ft. high in small bush, 3 fresh eggs, .66x.53, .65x.52, .67x.52.

Set e. Walke, N. C., May 23, 1891. Nest of leaves, strips of bark, straw, etc., fastened with spider webs, lined with fine grass and hog hair, placed 2 ft. up in crotch of beech bush. 3 eggs, incubation slight, .66x.53, .65x.53, .68x.53.

Set f. Walke, N. C., May 10, 1891. Nest fastened 2 ft. high in twigs of small beech bush. 3 fresh eggs, .67x.52, .68x.52, .68x.52.

Set g. Bertie Co., N. C., May 9, 1891. Nest in small clump of oak sprouts, 2 ft. high. 4 fresh eggs, .65x.52, .65x.51, .66x.52, .64x.51.

53. Mockingbird. 703.

Set a. Walke, N. C., May 28, 1892. Nest of sticks, cotton, moss, rags, etc., lined with fine weed stems, 7 ft. up in grapevine. 4 eggs, small, soft embryros .97x.73, 1.02x.76, .98x.74, .98x.74.

Set b. Walke, N. C., June 13, 1892. Nest of coarse weed roots and grass, lined with finer roots and horse tail hairs, 10 ft. up in apple tree. 4 eggs, small, soft embryros, .99x.74, 1.00x.74, .93x.74, 1.02x.75.

Set c. Walke, N. C., June 23, 1892.

Nest of sticks, roots, grass, rags, etc., lined with fine weed stems, 8 ft. up in grapevine. 4 fresh eggs, 1.06x.77, 1.02x.76, 1.03x.76, 1.00x.74. This and the two preceding sets came from one pair of birds.

Set d. Plymouth, N. C., June 6, 1890. Nest 8 ft. up in apple tree. 4 eggs, incubation begun, .96x.73, .92x.71, .92x.70, .94x.72.

54. Catbird. 704.

Set a. Walke, N. C., May 12, 1892. Nest in bunch of briars, composed of sticks, leaves, etc., lined with fine roots. 4 fresh eggs, .97x.71, .96x.72, .98x.71, .95x.71.

Set b. Walke, N. C., May 26, 1891. Nest 9 ft. up in bunch of vines in gum bush. 4 eggs, rather large embryros, .86x.66, .87x.67, .87x.67, .90x.67.

Set c. Walke, N. C., May 21, 1892. Nest 5 ft. up in bunch of bushes. 4 eggs, very small embryros, .90x.67, .90x.67, .89x.66, .91x.67.

Set d. Walke, N. C., May 12, 1890. Nest $\frac{1}{2}$ ft. up in clump of holly bushes. 4 fresh eggs, .91x.70, .97x.67, .92x.71, .92x.71.

Set e. Bertie Co., N. C., August 26, 1890. Nest in bee'en tree, 12 ft. up. 3 eggs, incubation commenced; .88x.67, .86x.66, .91x.69.

55. Brown Thrasher. 705.

Set a. Raleigh, N. C., Jnne 1, 1888. Nest 2 ft. high in briars. 4 eggs, .98x.74, 1.01x.74, 1.02x.75, 1.00x.66.

Set b. Raleigh, N. C., April 27, 1889. Nest 2 ft. high in bush. 4 fresh eggs, 1.09x.79, 1.08x.78, 1.16x.82, 1.12x.79.

56. Carolina Wren. 718.

Set a. Walke, N. C., May 5, 1891. Nest of leaves, moss, bark, etc., lined with hair, placed in boat laying on shore of Albemarle Sound. 5 eggs, small embryros, .76x.59, .77x.60, .77x.59, .76x.59, .77x.59.

Set b. Weaverville, N. C., June 15, 1892. Nest in crack of old log house, composed of rubbish, very bulky. 5 fresh eggs, .76x.58, .75x.59, .74x.58, .75x.58, .75x.59.

Set d. Weaverville, N. C., May 31, 1892. Nest on beam in old house. 5 eggs, incubation well along, .72x.56, .73x.54, .71x.57, .71x.56, .73x.57.

Set e. Weaverville, N. C., May 5, 1892. Nest of leaves, rootlets and grasses, placed in hollow stump. 5 eggs, incubation well along, .71x.56, .73x.59, .68x.58, .72x.59, .71x.57.

Set f. Weaverville, N. C., June 8, 1891. Nest placed in stable loft, com-

posed of hay and feathers. 6 eggs, incubation begun, .72x.55, .67x.54, .70x.55, .71x.56, .72x.56, .71x.56.

Set g. Weaverville, N. C., June 7, 1892. Nest of grasses, leaves, feathers, etc., lined with fine grass and rootlets, placed on the ground at side of stump, 5 fresh eggs, .72x.57, .73x.58, .72x.58, .70x.55, .69x.54.

Set h. Weaverville, N. C. April 10, 1892. Nest of grasses, leaves, feathers, etc., in crevice of log house, 5 eggs, incubation begun, .77x.54, .77x.55, .72x.57, .74x.57, .73x.57.

Set i. Bernardo, Madison Co., N. C., Near Hot Springs, May 4, 1892. Nest in hollow log, composed of leaves, grasses, feathers, moss, hair, etc. 5 eggs, incubation begun, .70x.57, .70x.55, .73x.57, .71x.56, .69x.55.

57. Bewick's Wren. 749.

Set a. Weaverville, N. C., April 24, 1890. Nest of rootlets and grasses, lined with feathers and soft material, placed in end of hollow log, 3 fresh eggs, .67x.51, .64x.50, .65x.51.

58. Brown Creeper. 726.

Set a. Craggy Mountain, Buncombe Co., N. C., May 1, 1890. Nest of hair, feathers, mosses, etc., placed in knot-hole in beech tree, 20 ft. up, 6 eggs, incubation well along, .63x.48, .62x.47, .63x.47, .65x.47, .62x.48, .63x.47.

59. White-breasted Nuthatch. 727.

Set a. Weaverville, N. C., April 15, 1891. Nest 50 ft. up in large white oak tree, composed of wool, hair, feathers, etc., 5 young birds and 2 addled eggs, .70x.53, .67x.53.

60. Brown-headed Nuthatch. 729.

Set a. Walke, N. C., April 29, 1891. Nest composed of cedar bark, pine seed leaves, wool, rotten wood, etc., placed in hole picked by the birds in dead pine stump 1 ft. from ground, 5 fresh eggs, .60x.46, .58x.46, .60x.45, .58x.46, .57x.46.

Set b. Walke, N. C., April 26, 1891. Nest of rotten wood, etc., placed in cavity picked by the birds in dead pine stump 5 ft. up, 4 fresh eggs, .59x.46, .54x.41, .59x.46. This nest also contained 1 Bluebird's egg, .79x.65.

61. Tufted Titmouse. 731.

Set a. Weaverville, N. C., May 6, 1891. Nest in hollow apple tree 10 ft. from ground, composed of moss, leaves, feathers, etc., 5 eggs, incubation begun, .66x.52, .69x.56, .69x.54, .68x.52, .65x.53.

Set b. Weaverville, N. C., May 5,

1891. Nest in hollow apple tree 4 ft. from ground, composed of leaves, moss, hair feathers, etc., 5 eggs, incubation well along, .71x.54, .71x.55, .70x.55, .72x.57, .67x.52.

62. Carolina Chickadee. 736.

Set a. Raleigh, N. C., April 26, 1891. Nest 7 ft. high in willow stub standing in water, 5 eggs, incubation slight, .60x.46, .59x.46, .60x.45, .58x.44.

Set b. Walke, N. C., May 4, 1892. Nest of moss and fine shreds of bark, lined with a cottony fibre, placed in hole 4 in. deep picked by the birds in dead ash stub 8 ft. up over water, 5 eggs, incubation slight, .58x.47, .57x.48, .57x.47, .56x.48, .57x.48.

Set c. Weaverville, N. C., May 10, 1892. Nest in pine pole 8 ft. up, 6 eggs, incubation begun, .58x.44, .58x.45, .54x.44, .58x.45, .58x.45, .59x.46.

Set d. Weaverville, N. C., May 10, 1892. Nest in pine stump 4 ft. up, composed of mosses, hair and feathers, 5 fresh eggs, .58x.46, .57x.46, .59x.46, .59x.47, .59x.44.

Set e. Weaverville, N. C., May 20, 1892. Nest in willow stump 6 ft. up, 6 eggs, incubation advanced, .55x.45, .54x.46, .58x.46, .55x.45, .58x.46, .57x.48.

Set f. Weaverville, N. C., May 20, 1891. Nest in oak stub 3 ft. up composed of hair, feathers, etc., 5 eggs incubation well along, .55x.46, .55x.46, .53x.45, .53x.46, .55x.46.

Set g. Weaverville, N. C., May 6, 1892. Nest in stump 18 in. from ground, composed of hair, feathers, mosses, etc., 4 eggs, incubation advanced, .57x.45, .55x.45, .58x.46, .55x.45.

Set h. Weaverville, N. C., April 15, 1892. Nest in pine stump 20 in. from the ground, composed of wool, hair and feathers, 7 eggs, incubation well along, .58x.46, .59x.46, .60x.46, .59x.46, .58x.47, .59x.46, .59x.47.

Set i. Near Hot Springs, Madison Co., N. C., April 28, 1892. Nest 4 ft. from ground in gate post, 4 fresh eggs, .61x.46, .62x.46, .59x.46, .60x.46.

Set j. Weaverville, N. C., May 10, 1892. Nest in fence stake 6 ft. from ground, composed of rabbit fur, feathers, etc., 5 eggs, incubation begun, .58x.45, .53x.42, .60x.47, .59x.46, .59x.47.

63. Blue-gray Gnatcatcher. 751.

Set a. Raleigh, N. C., May 4, 1889. Nest 8 ft. high in fork of sweet gum,

4 fresh eggs, .60x.46, .58x.44, .58x.45, .59x.45.

Set b. Weaverville, N. C., Nest in willow sapling 25 ft. from ground. 4 fresh eggs, .60x.46, .60x.46, .60x.47, .60x.46.

Set c. Raleigh, N. C., May 24, 1890. Nest 7 ft. high in small pine on horizontal limb. 5 fresh eggs, .55x.43, .58x.42, .57x.43, .57x.43, .58x.41.

Set d. Weaverville, N. C., May 30, 1891. Nest 20 ft. from ground in willow tree. 4 eggs, incubation begun, .55x.46, .57x.44, .56x.44, .57x.43.

64. Wood Thrush. 755.

Set a. Walke, N. C., June 6, 1891. Nest of leaves, straw and a layer of mud, lined with fine roots, placed in beech tree 10 ft. up. 3 eggs, small embryos, .92x.71, .94x.71, .96x.72.

Set b. Raleigh, N. C., May 16, 1888. Nest 5 ft. high in thick bushes. 4 eggs, .97x.72, .99x.72, .96x.72, .97x.73.

Set c. Sans Souci, N. C., May 15, 1888. Nest 20 ft. up in horizontal beech limb, made of leaves with a layer of mud. 4 fresh eggs, .91x.68, .94x.72, .92x.70, .90x.69.

65. Wilson's Thrush. 756.

Set a. Craggy Mountain, N. C., June 3, 1892. Nest of weed stalks and leaf stems, lined with rootlets, placed in a bush 18 in. from ground. 3 fresh eggs, .89x.64, .91x.65, .87x.65.

66. American Robin. 761.

Set a. Craggy Mountain, N. C., May 20, 1892. Nest in fork of beech tree 20 ft. up. 3 eggs, incubation well along, 1.11x.82, 1.14x.81, 1.12x.98.

Set b. Craggy Mountain, N. C. June 2, 1890. Nest in sapling 20 ft. up. 3 eggs, incubation well along, 1.10x.70, 1.09x.77, 1.13x.79.

67. Bluebird. 766.

Set a. Walke, N. C., April 24, 1891. Nest of pine straw, coarse grass and chicken feathers, lined with fine grass, placed in a cigar box nailed 7 ft. up in an apple tree. 6 eggs, incubation slight, .86x.66, .85x.65, .84x.64, .86x.65, .85x.64, .84x.65.

Set b. Sans Souci, N. C., May 3, 1889. Nest in top of decayed gate post. 4 eggs, incubation commenced, .80x.65, .81x.64, .84x.61, .83x.62.

THOMAS SMITHWICK,
Walke, Bertie Co., N. C.

The Sooty Grouse.

Dendragapus obscurus fuliginosus.

This large and handsome game bird is a favorite with sportsmen, but it is difficult to get a good shot at one as I have found by experience, for it keeps well hidden in the thick foliage of the fir tree, and is said to keep on the opposite side of the tree from the hunter as he walks around it.

The males are not often seen outside of the woods, as they feed on the fir buds near the tops of the trees a great deal of the time, or scratch under the moss and fir needles under the shelter of the forest. His hooting, which Davie likens to the booming of the Prairie Hen, is somewhat like the following words accented on the last syllable; *wo-oo, wo-oo, wo-oo, oo-oo*, gradually decreasing in force. It is a familiar sound from about the first of March until about the first of July, and from this they are frequently called "Hooters."

The females are more often seen in the open, scratching in the leaves among the brush or feeding in the grain fields.

They begin nesting in the forepart of April and probably rear only one brood in a season as I have not found fresh eggs later than May 10th. From five to nine eggs constitute the complement.

The nest is generally in, or at the edge of woods at the butt of a fir tree or stump, under a little brush, or in a fence corner and is merely a depression among the leaves and fir needles that are naturally there. The nests measure about 7.25 inches across and from 2.87 inches to 4.37 inches deep, according to the number of eggs they contain.

The eggs vary greatly in size and coloration as descriptions of the following sets will show.

No 1. Set of eight eggs, collected April 18, 1892. Incubation fresh. Two of these are buff cream ground color,

with reddish brown spots scattered over entire surface; another is dark buff cream with very few specks; another is dark buff cream unmarked at large end; the remaining four have a delicate pink ground color, spotted with fine red dots. Average size 1.90x1.36.

No. 2. Set of nine eggs, collected April 30 1892. Incubation begun. These have a dirty cream ground color; four are spotted over entire surface rather heavily with chestnut; one has very few fine specks at large end but heavily spotted at small end; the remaining four are spotted, not thickly at large end, but heavily spotted and blotched at small end, some spots being .62 inches across. Eggs about same size as No. 1.

No. 3. Set of seven eggs, collected May 30, 1892. Incubation begun. These have dirty cream ground color, and nearly all are marked sparingly at large end but spotted rather heavily at small end with light brown. This set is larger than usual. Sizes as follows: 2.00x1.38, 2.02x1.40, 1.89x1.40, 1.98x1.39, 1.88x1.42, 1.86x1.38 and 1.86x1.37.

No. 4. Set of six eggs, collected May 10, 1892. Incubation fresh. These have a rich cream ground color with pinkish tint, (except one which is a dull buff cream very sparingly marked) spotted and dotted over entire surface with reddish brown. Sizes about the same as No. 1. No. 4 is a beautiful set and probably as near a typical one as can be found, although some lack the pinkish tint.

ARTHUR L. POPE,
McMinnville, Ore.

California Vulture.

Pseudogryphus californianus.

The monarch of North American birds, the California Vulture, shares with the Condor of the Andes the dis-

tinction of being the largest bird indigenous to the western world.

According to early travelers the Condor was a bird of unequalled proportions; a monster to whose powers of flight distance was no impediment, and whose united strength and swiftness rendered it the lord of creation. Nearly all travellers indulged in wild theories concerning the Condor, deduced from the popular tales and superstitions connected with the legends and traditions of the dusky-hued natives of those distant lands.

Later naturalists, like Humboldt, more observant and less credulous than their predecessors, have shown the falsities of these pretensions and have proven the Condor nothing more than a large Vulture, rivaled in size, strength and powers of flight by a bird of our own clime, the California Vulture. Thus have the romantic and extravagant tales related of the marvelous Condor long since passed into the realms of fiction.

The California Vulture is the only species of its genus. It has the most restricted habitat of any of the large rapacious birds, being confined almost exclusively to the state of California. In autumn it is accustomed to visit the banks of the Columbia where in company with other birds and various animals it feasts upon the dead fish abounding there at that season. These visits are only temporary; when the food supply diminishes the Vultures return to their more southern homes.

The office in nature of this species, like that of the other Vultures is to remove carrion wherever found, that the evil consequences of it may be prevented. The Vulture seldom if ever attacks living animals, when it discovers a wounded creature it lingers near awaiting the approach of death. When the animal finally succumbs and falls defenseless to the earth, the Vulture and its con-comitants pounce upon it

and soon reduce the body to a skeleton. After gorging themselves they loiter near in a sleepy semi-torpid state until their food is digested. The more ravenous, when able to stir, perhaps visit again the carcass, if any of it remains, and renew their disgusting feast. The Vultures are not generally courageous and are often put to flight by birds much smaller than themselves. Their strength is great but their claws are comparatively weak, yet four of them are reported to have dragged a young bear weighing over one hundred pounds a distance of two hundred yards.

The flight of this bird is easy and graceful to the extreme. With little or no perceptible motion of the wings and moving in expansive circles it sweeps majestically along, covering by its immense powers of flight a vast extent of territory, and searching the earth below with its keen eye for its food. It sometimes, especially when hungry, mounts to a lofty height, appearing as the least speck upon the cloudless sky or perhaps venturing beyond the limited vision of man, but not of its own for by its powerful eye it scrutinizes every portion of the ground below, able to perceive any carcass there. On the ground it moves with becoming dignity, slowly and stately, but when it attempts to accelerate its pace it becomes at once ungraceful and clumsy. When it arises it runs forward a short distance to give impetus to its body.

The Vultures are becoming perceptibly fewer in numbers. They were once common in the warm valleys of Central California, where they found subsistence upon the dead of the great herds that pastured there unattended throughout the year. From the greater portions of these regions the herds have disappeared as the land became devoted to agricultural pursuits, consequently the Vultures are seen no more in those places, unless it be a straggler that has ventured from its mountain-

ous home to soar at a dizzy height in these semi-tropical skies. The advent of man is invariably followed by the retreat of these birds to more deep-seated haunts. It is possible, perhaps probable, that with the ultimate settlement of the wildest regions of California that the California Vulture will disappear and, like the Dodo and Great Auk, be numbered among the creatures that once were.

The Vulture loves the mountain fastnesses where it nests among the inaccessible rocks and cliffs, and lives the undisputed monarch of the Alpine wastes. The eggs are usually laid upon the ground between rocks, or in crevices or small caves. An egg in the Smithsonian Institution taken near Sau Rafael is of an uniform pale orangeish blue color, no spots, elongate-ovate in form, decidedly more pointed at one end than the other, and measures 4.40x 2.50. The complement of eggs is one or two.

There is authority for the statement that the Vultures when they find a carcass tear open the abdomen and through the aperture remove the entrails and fleshy parts of the body and leave the skin covering the bared bones. As I have never witnessed this performance I am unable to assert either the truth or falsity of the statement, but from what I have seen I am of the opinion that it is true, at least as regards the larger mammals.

On the western border of the San Joaquin valley is a level, waterless expanse measuring many miles in extent, where neither tree nor hillock arises to obstruct the vision, whose only inhabitants are a few Horned Larks, rabbits and coyotes. Here linger a few of the herds that once roamed over the central part of the state. They find their food among the remotely situated mountains and quench their thirst at the side of the distant Tular Lake; whither it seems, at stated hours they wander along sin-

uous paths over the arid land in slow, lumbering trains to quaff the insipid waters and lounge upon the muddy and grassless banks.

Here and there upon hot and dusty plain are mounds of whitening bones, each marking the site where once some creature fell to become the food of the scavengers of this dreary waste. Occasionally we meet with the skeleton of a cow still covered with the dry hide, through an aperture in the abdomen the white bones are revealed. A glance at the heavens tells the tale. Far up, appearing as so many dark specks, sail a few Turkey Buzzards and Vultures awaiting the fall of another victim. The whitening mounds that dot this parched land, the reclining bodies mouldering into dust have all in their turn furnished a repast for yon fleeting specks.

H. C. LILLIE,
Ann Arbor, Mich.

A Lucky Day.

It was the ninth of June, and the sun had risen in a cloudless sky.* The general indications promised a fine and rather warm sunny day. In my estimation, it was not to be a perfect collector's day, for I prefer to have the solar orb obscured, as it is then less difficult for one to recognize a small bird in the tree-tops, or to discover a cunningly concealed nest among the branches, and then it is not so fatiguing as when the sun shines brightly.

I had decided to spend the day in collecting birds and their eggs, and consequently I started early, fully equipped with all necessary apparatus. My first objective point was a swamp, distant about one mile. On the way I secured a fine male Scarlet Tanager, and a set of four eggs of the Chewink. This nest was on the ground, near the butt of a white birch, and partially concealed by brush.

On arriving at the swamp, I soon found the particular spot that I had in mind. The large white oak and swamp maple trees were beautifully draped and festooned with the Spanish moss, which grows so abundantly in certain localities. This was a favorite haunt of the Blue Yellow-backed Warblers, as was made evident by the frequent songs of the males overhead. I spent some two hours diligently searching for nests, and at the expiration of that time, I felt well rewarded by finding three, two of which contained four eggs each, and one only two eggs.

These nests were very artistic affairs, being entirely constructed of moss, excepting a scanty lining of feathers, pine needles and the soft inner bark of the chestnut tree. They all were suspended pendulously from horizontal branches and they were rather difficult to distinguish from pendant masses of moss.

The eggs were creamy roseate before blowing, and they were dotted chiefly at the larger end, with several shades of reddish brown.

In this swamp I also obtained a pair of Canada Warblers, and under an over hanging rock, a nest containing four eggs of the Black-and-White Warbler. The female fluttered out nearly under my feet, or I should, in all probability, not have discovered it. The nest was in a depression, and it was neatly constructed of grass, rootlets, paper and horse hair. The eggs were white, spotted with reddish-brown and lilac, and each had a noticeable wreath of confluent splashes and dots around the larger end.

Later in the day, in high oak woods, I flushed a Whip-poor-will and after an extended search in the underbrush, I found two of the prettiest eggs I have ever collected, in a slight depression, among the dead leaves. They were creamy-white in color and dotted, and blotched with shades of light brown, and lilac, some of the markings being

partially obscured. I waited to secure the birds, but could get but one—the female.

My next prize was a nest of the Wood Thrush, which was placed six feet from the ground in a white oak sprout. The locality was secluded, the nest was composed of twigs, dead grass, grape vine bark, dead leaves, and lined with mud and rootlets. There were two eggs, considerably rounded at the ends, and of a beautiful bluish-green color. As these eggs were fresh, I concluded that the set was incomplete.

The Wood or Song Thrush is one of my favorite birds, and I like to listen to its clear bell-like note, which is usually uttered from the top of some forest tree, in the early morning, or on a cloudy day.

The regularity with which this bird arrives from the south is very remarkable. My record of its arrival for three consecutive years is as follows: May 9, 1879, May 8, 1880, May 9, 1881.

While on my way home, I happened to pass through a pasture where junipers grow here and there. From a small tree, I flushed a Black-throated Green Warbler. Near the butt, and three feet from the ground, I discovered the nest. It was a neat and compact structure, fabricated of grass and rootlets finely interlaced and lined with brake-down, and white horse-hair. Lying within the concavity of the nest were four eggs of a delicate pink color, dotted and blotched with purplish-brown and vandyke, while a very noticeable ring of confluent marks encircled their larger ends. Later in the season I discovered a second nest in this same pasture, but in another tree. It contained young, and it was probably built by the same birds, as the structure described above.

My last nest that day, was a prize to me, as it was my first of the kind. It was discovered on the upper side of an oak limb, which grew horizontally over

a cart path. My eyes fell on it accidentally, and at first I was uncertain to what species it belonged, but upon climbing the tree, the female bird flew off, and I recognized the Scarlet Tanager. The nest was very loosely made of dead twigs, and lined with fibrous roots and pine needles. It contained three greenish-blue eggs dotted with purplish-brown, the marks being thicker at the larger ends.

I arrived home tired, but well pleased with the birds and eggs collected, the more common kinds, of which, I have not taken space to describe.

CHARLES L. PHILLIPS,
Taunton, Mass.

Winter Collecting or Something About Owls.

The near approach of the collecting season, reminds me, that it is time to inquire, "Mr. Farmer, did you ever find an Owl's nest, or did you ever see on the ground at the base of a tree, little balls of hair and bones?" and not infrequently do I receive from the one to whom I have propounded this query, a reply in the affirmative, then, if you were to see my note book you would read, "Jan. 16, '93, go 2½ miles on new pike to Moaf Turner's, then down through the lane, and follow the path to a big rock at the bend of the creek, a beach tree 25 or 30 yards to the southeast, an owl's nest," or a nest of my own discovery, reads: "Dec. 22, '92, flushed a Parred Owl from a beach tree 582 steps from south side of old gravel pit, Elliott's woods." I have 6 nests spotted so far this season, and of the 13 nests heard of last season I took 4 sets and found one nest of 5 young screechers, in a sugar tree one side of which had a hole large enough for me to easily insert my hand, but I immediately removed the afore said egg grabber. Finally mustering up courage I tried it again, with the above result.

On Feb. 21, '92, I took a set of the Great Horned Owl, from what I think was an old hawk's nest, although it may have been the nest of the American Crow, as it was only 21 feet from the ground in a large spreading oak tree, the complement of eggs was two, almost round, and pure white, 2.26x1.82 and 2.30x1.80. I secured the old bird and now she occupies a prominent place among the house flowers, while the little white gems grace my cabinet, as set No. 1. March 5, '92, was a fruitless hunt, save a specimen I have labelled "Nyctala australis." Saw-whet Owl, Female, I examined this bird for eggs, but found no signs of any, although, I think they breed here.

March 14th was a good day for owls, or rather a rough day on owls and a good day for me, for on that eventful day after a tramp of over 8 miles, we came home with two beautiful specimens of "Megascops asio" one of the mottled gray variety, and the other a pretty brownish red, these birds were caught by putting a sack over the hole and beating on the side of the tree, we also took a set of six white eggs; nearly round, two of which were badly incubated, the others apparently fresh. In this same dark lonesome woods, we shot a Great Horned Owl, but the shot tore him to much for a cabinet specimen. Next we took a set of Barn Owl's from an old apple tree in an orchard near the house, these eggs are more oval in shape than those of the other species, the average measurement of the six eggs is 1.75x1.30 in this nest as is characteristic of all the owls was a scanty bed of feathers plucked from the breast of the parent bird, and a few dried sticks and leaves, the few leaves probably put there by "Dame Nature."

On March 31, I took another set of the Barn or Hoot Owl from a walnut tree close to the road, when I happened to see the old bird fly in, as I was passing in a buggy. Mr. Davie, in his valua-

ble book, speaks of this owl in Southern California, nesting in various places, such as burns, holes in banks, bird houses, old bird nests, holes in the ground etc., but if they nest any place except in hollow trees in this locality, I have never heard of it.

GEO. W. PITMAN,
New Castle, Ind.

The Sagacity of Fish Hawks.

While at Eton, N. J., last summer, I was much surprised at the sagacity of a flock of Fish Hawks.

My brother and I were out collecting one day, when I saw a fine specimen perched on the top branch of a tree, situated not far from an orchard.

I shot and the ball hit on its wing. The bird dropped, fluttering and screeching from bough to bough until he contrived to clutch at a strong forked branch and rested there.

All day long he sat uttering piercing screams, and the next morning was found to have gathered around him a large circle of hawks who seemed to be holding council. Each in turn chattered busily, as if giving advice or proposing plans of relief, while their wounded brother seemed to listen eagerly and now and then put in a word.

We called several friends, and the approach of human beings produced great consternation among the birds, but they did not fly away and desert the disabled one.

They fed the bird several times, some flying to the ocean and bringing small fish in their claws.

It was easily seen, however, that the nearness of the tree to the orchard caused the greatest anxiety, and even after the invalid's hunger was satisfied the other birds kept flying away in parties, while others perched on the tree as if waiting for the messengers return. It was soon evident that some

plan had been made, but nothing happened before sunset, when a single hawk appeared on the scene, then another, and another; a chattering began, and the excitement increased as the messengers kept returning in twos and threes.

The wounded bird seemed joyfully expectant, while the others flew around it joyfully. Soon a loud flapping was heard overhead, a flock of hawks appeared, and in their midst a giant hawk much larger and stronger than any of the rest. For a few moments it perched upon the topmost branches of the tree, then started up and began circling about, coming lower and nearer to its wounded brother, until, suddenly swooping it raised the latter in its claws and soared away with him triumphantly. The other hawks following leaving us overwhelmed with astonishment. We did not doubt that they were taking the hawk to some place where he could rest until the wound healed.

EDW. P. THORPSTON,
Hockessin, Del.

American Goshawk in Illinois.

In the August number of the OÖLOGIST a writer gives an account of the finding of what he calls the nest of an American Goshawk.

I had expected some of our collectors would speak of it but as none of them have I will.

Now I have collected birds for at least ten years and will say I never saw an American Goshawk yet in this state, nor can I find among the reliable collectors I know, three of whom collect on the Illinois river, anyone who has found a nest and few have even seen a hawk.

Ridgeway in his "Catalogue of the Birds of Illinois" says: "Winter visitor; rare southward," yet the writer in the OÖLOGIST says it is "a

kind often seen in these parts, but so far as known seldom breeding here." This writer only saw the bird and like a great many young collectors, at once jumped to the conclusion he had a great find, when what he did find was probably a Cooper's Hawk, a bird I know "is a kind often seen in these parts."

I wish young collectors could have the need of careful identification more thoroughly impressed on them. I know several collectors (?) who have no guide but Davie's Key and will hunt in that until they find an egg nearly like the one they have, and then have a great find.

Another thing I might as well kick about while I am at it is incomplete data. One with a set of Great Blue Heron gives "Nest in a Black Oak tree 40 ft. up," and no more—and the collector is not a boy either.

I don't suppose it is any use to rake up the subject of large holes in eggs, but some I get make me tired.

A. C. M., Kewanee, Ills.

The Yellow Palm Warbler.

Dendroica palmarum hypochrysea.

This warbler is very common here during the spring and fall migration but I had always supposed that it bred north of this State.

On June 1st a friend of mine found a nest with 4 young of this warbler in a nest on the ground in a bog between Orono and Bangor.

June 4th my friend and I started for the bog in hopes of getting a set of thier eggs. We had been there a short time when we scared up a female and I was delighted to find a nest with 5 fresh eggs. The female staid within a few feet of us and the identification was certain.

Shortly afterward I found another

nest with 4 young and in the course of the afternoon my friend secured a set of 5 eggs in which incubation was advanced. Altogether there must have been ten pairs of these warblers breeding in an area of 1 square mile as I saw at least that number feeding young birds in trees in the bog about June 19. This is the only place hereabouts that I know of where the bird breeds and possibly the only place in the State as I can find no authentic record of the nest and eggs having been taken in the State. If any one else knows of instances of its breeding in Maine I would be pleased to hear from them

ORA W. KNIGHT.

Bangor, Maine.

Collecting Black Vulture Eggs.

The Black Vulture (*Cathartes atratus*) is much more abundant in this vicinity, Montgomery Co., Tennessee, than its first cousin, the Turkey Vulture (*Cathartes aura*). In fact, I have rarely observed the latter, while there is scarcely a day passes in which I do not notice the former.

This county is crossed by the Cumberland river which has formed numerous and large limestone bluffs along its course. The most of these bluffs have "eaves" or holes running back into them, some only two or three feet deep, others deeper. It is in these "eaves" that the Black Vulture usually deposits its eggs, though sometimes they are found under an overhanging ledge of rock. As a general rule they do not go far into the bluff, but lay near the entrance of the hole, just far enough inside to be sheltered by the rock.

Andubon, in his "Birds of America," states that a "prostrate log or excavation in a bank of earth, suffices the Black Vulture as a nesting place."

Davie, in his "Nests and Eggs of North American Birds," states its breeding place to be "in hollow logs, decay-

ed trunks of trees, stumps, and on the ground."

Audubon's statement agrees with this locality better than Davie's, though neither mention caves or rocky bluffs. In this part of the country they are never known to nest in any other place. I have never found a nest nor heard of one being found away from the river. There is a bluff five miles below this city, Clarksville, on the river which is said to be the breeding place of a regular colony of the birds. It is called the "Red Rocks" and is a tremendous bluff literally filled with caves. I have never been there during the breeding season but have passed the place in a boat later in the summer and from the large flocks of young Vultures seen on the banks of the river in that vicinity, I am inclined to believe it the breeding place of many birds. It is a very hard bluff to climb, but, nevertheless, I intend to try it, with the assistances of a good rope, during the coming season.

The collecting of Vulture eggs on these bluffs is quite dangerous. A slip of the foot, or any other slight mishap is liable to be attended by serious consequences. I will describe some my trips after their eggs.

With us the Vulture nests from the middle of March to the first of May.

By reference to my note book for 1892, I see that my first set for the year was taken April 5th. I had noticed a pair of birds about this bluff, which was just across the river and not more than a third of a mile from town, for some time, and had decided that they had a nest there. My belief was strengthened by knowing that one of my fellow collectors found a nest there the previous year, and in this region, the birds frequently occupy the same caves from one year to another. So on the afternoon of the above mentioned day, I went with a companion to investigate this bluff. After walking about the foot of it some time, the old bird flew

off from above my head. There were several holes in that part of the bluff and I explored, without success, all I could see. Finally I went on top the bluff and my companion went off some distance from the foot, in order to get a better view of the situation. He called to me that he saw something that looked like another hole just above a small ledge which obscured the view. I went above the place he indicated and finding a small tree growing up from the shelf just where he located the hole. I climbed down it, and was rewarded by finding a beautiful set of two eggs in the entrance of a large hole which ran sideways into the bluff and out of which the tree that I had climbed down, was growing. I had quite a hard climb getting back with those eggs, but by hard scrambling and making use of both the tree and the face of the bluff, I reached the top safely, and in due time was at home, and my eggs were safely blown and put away in my cabinet.

On the 15th of the same month, I found my third set for the year. I went in my boat to a bluff three miles above town. As I approached the bluff, half a dozen or more "buzzards," as they are called about here, flew out and settled on the trees. This was a worse bluff for climbing than the last mentioned. It consisted of three parallel ledges, from ten to seventy-five feet apart, running its whole length, with but few places where a person could get from one to another. I went over the lower two without finding anything. The third and highest one was almost at the top of the bluff but not quite high enough to get on from above and out of reach from the ledge below. This bothered me a good deal but finally I "got there" in a risky and dangerous way by pulling my self up by means of some rather slender roots which hung down from above. After getting on the ledge, I saw it was a risky business to go along it. It was fully 100

feet above the water and in many places not more than a foot wide. I crawled along almost to the end without finding the object of my quest, in one place having to get down flat on my stomach and crawl under an overhanging ledge. Truly, "the way of the collector is hard," nevertheless, if he keeps going, he usually accomplishes his end in the course of time, which was what I did. After rounding another corner or two, I came to a place where there was another overhanging ledge, and far back against the bluff was the finest set of Vulture eggs I have ever seen. Perfectly clean, as if just laid, unusually large, with pale blue back ground, sparsely marked with dark brown splotches, one egg having only six spots on it. As it was getting dark and I was three miles from home, I had to leave that bluff, though I must confess, I left very reluctantly for I felt certain of being able to find more.

Of all the Black Vulture eggs I have handled—probably fifteen or more sets last year alone,—not one have I noticed which had the "pure white back-ground" which Audubon says the eggs of this species have. In every instance the ground color was distinctly *bluish*, which agrees with Davie's statement as to this point. I would like to hear from some other collectors who hold an opinion on this subject, through the columns of this highly esteemed paper, the OÖLOGIST. May it have a long and prosperous existence.

JAS. A. LYON, JR.,
Clarksville, Tennessee.

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A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, ALBION, N. Y.
Editor and Publisher.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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* * * Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

A. M. Farmer says he found the King Rail quite common in Boone Co., Iowa.

The new edition of Langille's, "Our Birds in Their Haunts" is now being delivered to abvance subscribers.

Friend Kibbe, of Mayville, N. Y., says:—"I took sets of Red-tailed Hawk eggs, 1890, 1891 and 1892 out of the same nest."

ERRATA—On page 44 of this Oölogist somebody made a bad mess of the word "amateur," we think that both Mr. Mathes and the Editor can spell the word.

E. L. Haley, of Phillips, Me., writes: "June 6, in coming from Redington to Saunders, down the railroad track, a distance of six miles, I found twenty-seven nests of the Black Snowbird, (*Junco hyemalis*) with one exception containing young. I also found the commencement of two more nests of the same species."

In glancing over the pages of this months Oölogist, it is self evident that "the boys" are with its Publisher and that if the "tin wedding" volume of this popular publication is not a "howling success," its not their fault.

H. Mathes, of Denver, Colo., writes that last season he founded three nests of the American Dipper, none of which were of green or living moss and the average size of each was about 5x6 in.

C. C. Renshaw, of Boyce, Va., writes of taking two sets (10 eggs) of Bank Swallow from one hole, on May 23d. He says that the second nest was about 4 in. back of the first one, and seemed about one inch higher.

E. A. Fero, of Cohoes, N. Y., writes that last October he was presented with a fine Sand Hill Crane in meat by a friend who shot it near that place.

H. C. H., of Cortland Co., N. Y., writes: "My wife says if the house should catch fire, I would probably save my Oölogists first and then come back after the children."

H. D. Watts, of Compton, California, writes of seeing a "pure white" Blackbird—and Chas. Bowers, of Columbia, Pa., a White Crow. G. M. A., of New-

ton, Mass., writes: "While collecting on the 11th of June, I found a nest of the Yellow-billed Cuckoo containing seven eggs. The nest was 4½ feet up in a barberry bush, and made of twigs, leaves and a few weed-stalks, lined with dried leaves and pine and spruce needles."

The Jan. and Feb. Judges contests promise to be the mostly hotly contested ones on record but we doubt if five Judges, either month, will name the winning articles in their exact order.

Under date of Jan. 1, Prof. A. B. Carr, of Townsend, Vt., writes: "When building the fire this morning, I saw the first bird for 1893, a Winter Wren. I have identified 94 species the past year and hope to identify more this year as I expect to spend my winter vacation among the winter birds on the coast of Maine, and my summer vacation in Northern and Southern Maine."

It has been rumored that "The Naturalist's Publishing Co.," the "Des Moines Naturalist's Supply Bureau," the "American Naturalist's and Sportsman's Supply Co.," the "Rev. Joel P. Ashford & Co.," and that "Anti-Embryo," "Dr. L. B. Allie," all of Des Moines, Iowa and into much of an embryonic stage of development to be properly classified—that "Letson-Balliet" will cover the lot. Is this a case of mistaken identity?

Any name appearing on the Oölogists exchange or advertising pages who deals, or has dealt dishonestly or crookedly with any of our patrons, is a promising candidate for our slumbering "Black List." We now have two or three parties "on the string"—if you have *any*, write the editor of the Oölogist, stating full particulars and enclosing what evidence you have, this we will thoroughly sift, and will freely and gratuitously advertise the deserving ones.

We are now receiving enough A No. 1 MSS. to make the Oölogist a 50 or even 100 paged monthly magazine, this however is out of the question but we will make it 32 pages each month, 24 of reading matter, if each of our present subscribers will send in a single new subscription, or by increasing the subscription price we might also enlarge its size. We prefer to receive the new subs. and let the price remain at 50 cents per year. What shall we do about it?

That new edition of the "Oölogists Hand-Book" which we have been talking about for the past two years, and for which we have nearly four hundred (400) advance subscribers, we are pleased to state promises, to materialize in the near future. One of our Oölogical assistants has been for the past four weeks uninterruptedly at work compiling and condensing the MSS. We are now in hopes of having the copy completed and placed in the hands of our printer not later than March 1st.

Good practical articles on cabinet making, or fully explaining *how*, in connection with any of the necessities of the oölogist and ornithologist—such articles should be accompanied with drawings if necessary—would have a tendency to strike the editor favorably. Articles on common every day species, occurrences, collecting trips, etc., possessing only ordinary merit and local lists are not solicited and will rarely, if ever, be used.

Oliver Davie, of Columbus, O., in a letter of recent date, in speaking of his new work—"Methods in the Art of Taxidermy," says: "The book will now be gotten up in the following style—blue-green silk cloth binding, uncut edges and gilt top; each copy will be placed in a handsomely decorated, open sided, paste-board box. The book will be about two inches and a half thick, royal

octavo, with seventy-five plates. I will write you more about the book very shortly." We understand that this elegant volume will soon be ready for delivery and our readers who are fortunate enough to be enrolled as advance subscribers will find that Friend Davie returns \$ for every 50 ets. they invested. — Simply another case of "we told you so."

Our friend White—Chas. Acey, the hustler—of Omaha, took us in hand for neglecting to mail his Jan. OÖLOGIST, but upon receiving his copy by next mail, he dashes off the following: "I sent you a Postal Card on the 15 inst. stating that I had not received my OÖLOGIST yet. I wish to ask pardon for being so rude and not waiting longer. But you see my old friend, Mr. Trostler said he had got his and of course I was very eager to get mine, because I think the OÖLOGIST is one of the best of its kind, and am very anxious to receive it. Here is a little poem showing how I felt, when the mail man handed it to me.—

Winter has trampled our green Earth
Beneath her cold feet,
And drove our songsters south,
With her sharp winds and sleet.

It has darkened our blue sky,
And laid our flowers low;
It has buried Nature,
Beneath the downy snow.

But there is one thing Frank,
And this is what I'll say:
It hasn't killed the OÖLOGIST yet,
So let her "whiz" away."

The Publisher of the OÖLOGIST has in a single mail (Jan. 30th,) received sufficient mss. to fill every page of reading matter in this issue. He rarely receives less than three or four articles each day, sometimes as high as ten and at present fully one-hundred during the month. Only about ten of this number can be used in a single issue which are always, in the editor's estimation, "a survival of the fittest."

If you desire yours to be classified by him in this grade it would be well to see that they are timely; carefully prepared; on subjects and species not fully written up in some previous OÖLOGIST; Articles on the nesting of rare species or species of restricted range written by collectors who have "been there" are most always found available.

DECEMBER CONTEST.

Seventy-one Judges.

Prize winners and credits received by each were as follows:

1. Professional Eggling, etc. 334.
2. A Collection of N. C. Birds Eggs. 246.
3. Two Western Birds. 192.
4. Cerulean Warbler. 187.
5. The Fascination of Oölogy. 120.

Sixty-seven Judges named the winning articles—thirteen their exact order.

The Judges prizes were awarded as follows:—

1. No. 10—J. Warren Jacobs, Waynesburg, Pa.
2. No. 22—Harry L. Heaton, Oberlin, Kans.
3. No. 23—Ned Hollister, Delevan, Wis.
4. No. 24—Gee. W. Pitman, New Castle, Ind.
5. No. 32—B. S. Bowdish, New York City.
6. No. 33—A. B. Blakemore, New Orleans, La.

We awarded two 5th prizes, as Judge No. 33, although one mail later than No. 32, was, taking distance in to consideration, really entitled to it.

The lists of the following Judges were correct—and to each we mailed a "Standard Catalogue."

- No. 42—C. E. Bryant, Vt.
 - No. 43—W. C. Pickens, Ala.
 - No. 52—Ed. Wall, California.
 - No. 54—C. Houghton, N. Y.
 - No. 61—C. A. White, Neb.
 - No. 70—Wm. Hawley, N. Y. City.
- Prizes were mailed on Jan. 18th.

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Scaphites nodusus10 to \$2.00
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Agates, rough10 to .50
" polished25 to \$2.00
California Onyx, polished40 to \$1.75
Petroskey Agates, "25 to .75
Fossil ferns15 to .75
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Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
THE OÖLOGIST.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7 50
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Wilson's (and Bonaparte's) "American Ornithology".....	7 50
Maynard's "Birds of Eastern North America" (text complete). .	15 00
Webster's "International Dictionary" latest edition.....	10 00
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Wm. M. Thackeray's Works, 10 vols.....	10 00
Chas. Dickens' Works, 15 vols... .	11 25
Jenk's "Comprehensive Commentary of the Holy Bible"	5
large 900 paged Volumes..	25 00
Sir Walter Scott's Works, 12 vols	12 00
\$10 worth of Phonographic Books and Publications	10 00
An 8-qt. Jack Frost Ice Cream Freezer	6 50
A Due-Bill good for \$31.50 towards a new \$46.50 Marlin Repeating Rifle.....	31 50
A Due-Kill good for \$33.00 towards a new \$45.00 American Union (same as New Home) Sewing Machine.....	33 00
A Due-Bill good for \$12.00 towards a new \$20 double case Odell Type writer.....	12 00
2nd Prize each month will be a part of "Maynard's Birds of Eastern North America," each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50	
3d Prize—Brewer's "North American Oölogy" unbound, no plates, original price about \$3.00	
4th Prize—Baird's Review of American Birds" originally sold at \$2.00.	

5th Prize—Mrs. St John's "Audubon the Naturalist." \$1.00.

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded a duplicate of the 5th prize.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the OÖLOGIST.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than Meh. 10th. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talk about Business."

3d A collection of 20 common eggs.

4th A collection of 16 good minerals.

5th A 50 cent pkg. of Novelties.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 ets.).

All Judges' prizes are sent by mail prepaid.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.



THE OÖLOGIST.

Monthly.

50c. per Year.

VOL. X.

ALBION, N. Y., MAR., 1893.

NO. 3

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 5c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 5c. Terms, cash with order.

Strictly first-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

WANTED.—Stamps, U. S. Frac. Currency, Old Bank bills, Indian relics in exchange for the Minerals, Shells and Indian pottery. A. C. LUNT, 27 Pleasant St., Beverly, Mass.

WANTED.—Bird skins in large or small lots. Rare sets to exchange for same. WALTER F. WEBB, Geneva, N. Y.

SIX CANDLE Electric Lamp, with socket, and 3 oz. roll white adhesive tape (good for cuts), for cl mbers. Davie's "Nests and Eggs," or best offer. BERTON GARRETT, Ballston Spa, N. Y.

WANTED.—A Standard work on Taxidermy, also a good Mandolin. Desirable sets of eggs to offer in exchange. WALTER TRUITT, Chanute, Kans.

FOR EXCHANGE.—A collection of 276 stamps. Many very desirable. For best offer of eggs in sets. C. C. CANTWELL, Sterling, Kansas.

EXCHANGE NOTICE.—Eggs, singles, 126, 80, 72, 74, 622a, (no data) for 10 eggs, sets with data of 721, 25 or 704. BENJAMIN HOAC, Stephentown, New York.

FOR Every 25c. worth of 1st class Bird Eggs sent me I will send 50 assorted Fish hooks. Send to CHAS. TUCKER, Mt. Adams, Cincinnati, Ohio.

FOR EXCHANGE—New trays, books on Natural History and 2d class eggs. Wanted: Eggs in sets and copies of "YOUNG OÖLOGIST." H. M. HALL, Riverside, Cal.

FOR SALE.—A large number of complete files of Ornithological magazines for sale cheap. WALTER F. WEBB, Geneva, N. Y.

FOR EXCHANGE—Cal. birds eggs for several 20 ohms telegraph instrument; state condition, etc. OTTO J. ZAHN, 427 S. Hope St., Los Angeles, Cal.

FOR EXCHANGE—A collection of over two hundred varieties of first-class bird skins. Send for list. H. L. CHEVILLON, Richmond, Ill.

TO EXCHANGE.—Three hundred and fifty (350) odd numbers of Chicago Am. Field and Forest and Stream for sets not in my collection. ROBERT WARWICK, Fleming, N. Y.

EGGS for sale cheap, or will exchange fine clutches of Pigeon Hawk, Baldpate, Sharp-tailed Grouse, Marsh Hawk, Snow Bunting, Longspurs, etc. Send for price list. F. DIPPIE, 324 George St., Toronto, Can.

A FINE collection of 90 birds eggs in singles, will exchange for first-class eggs in sets. Write at once. All letters answered. V. H. DEWEIN, 103 Chambers Ave., Peoria, Ill.

FINE SKINS of Old Squaw Duck and Serrated Merganser, for exchange. PHILIP LAURENT, 1330 Chestnut St., Philadelphia, Penn.

FINE SETS of A. O. U. Nos. 75, 79, 311, 320a, 396, 410, 420a, 496, 505, 586, 692, 707, 755 and others to exchange for same. Lists exchanged. F. L. BURNS, Berwyn, Penn.

TO EXCHANGE.—1st Vol. "Birds of Eastern North America" and A. B. C. of Carp Culture" for first-class eggs, minerals or corals. ELLIS HADLEY, Dayton, Oregon.

WANT to exchange Insects; especially *Coleoptera*, (*No Lepidoptera*). J. O. SNYDER, address until June, Leeland Stanford, Jr., University, Palo Alto, Calif. Permanent address, Waterloo, Ind.

WHAT HAVE YOU to exchange for 15 different first-class eggs, \$15 worth; 500 tobacco tags, and \$10 worth of rare minerals and rocks with data. JOHN J. KINGSLAY, 40 Elm St., Rutland, Vt.

IOWA Collectors. Thrive Minerals, Fossils, land and fresh water shells. Birds eggs and skins to exchange for same or scientific books THOS. S. HILL, Knoxville, Iowa.

WANTED. During the spring months, Owls, Hawks, and water birds in the flesh and as fresh skins. All kinds taken. Will pay cash. Address E. W. MARTIN, Taxidermist, Buchtel College, Akron, O.

WANTED:—Everyone to send stamp for price list of stuffed birds. Sample of work postpaid 40c. Finest of work guaranteed. D. MEXSELL, Pekin, Ill.

EXCHANGE.—War tokens, curios, etc., for old U. S. copper coins, Indian relics, etc. Also one \$12 flat corner for best offer in Indian relics and curios. All answered. A. M. SMART, Plaistow, Wis.

WANTED.—Hopkins & Allen's 14 gauge single barrel, 13 1/2 in. octagon revolver. Will give cash or skins, eggs in sets, mounted bird, etc. B. S. BOWDISH, 109 W. 40th St., New York, N. Y.

WANTED.—To exchange first-class eggs and insects especially beetles, with Southern and Western collectors the coming season. Beetles mounted or unmounted, determined or undetermined. D. B. YOUNG, Newport, N. Y.

WANTED.—Books on Ornithology, Warren's Birds of Penn., Ridgeway's Manual, etc., at once. Will give good exchange in anything desired. W. F. WEBB, Geneva, N. Y.

500 first-class eggs to exchange. Send your exchange list and I will send mine in return. W. E. HEDLEY, 505 Howard Ave., Buffalo, N. Y.

NOTICE.—Fine birch bark canoe, 10 ft. long. Made by Indians on north shore of Lake Huron. Will sell or trade for double-barreled gun. All answered. WESLEY WRIGHT, 105 North Fullerton Ave., Montclair, N. J.

NOTICE.—For every guaranteed live, energetic Bird Egg Collector's name sent me, I will give a Foreign Postage Stamp. In case of several names will send no duplicates. No Trash. A Noddy for every 35 Southern Collector's names. Write for weekly slips, they will surprise you. Address LAFAYETTE G. DURR, 1716 West End Ave., Nashville, Tenn.

TO EXCHANGE.—Autographs of Ex-Presidents, Statesmen and others, for Indian relics and curiosities. F. E. STEARNS, Box 67, Ermine, Pa.

A No. 6 Johnson 14 K. Gold pen and Holder, which are worth Four Dollars. Will sell or exchange for best offer. JESSE C. A. MEEKER, 65 Hough Ave., Bridgeport, Conn.

WE WILL exchange mounted specimens of any kind for desirable unmounted ones. Full price for stamp. HUGBERT BRO'S CO., Taxidermists, 412 No. 14th St., Omaha, Neb.

TO EXCHANGE.—Nice cabinet specimens of (Catlinite) sacred Pipestone, postpaid 50 cts. In quantities exchange rate 15c per lb. Wanted sea shells, corals, fossils, arrow and spear heads, polished agates, Eggs and Skins. A. D. BROWN, Box 156, Pipestone, Minn.

TO EXCHANGE.—A "Library of Natural History," 400 Engravings and 880 pages, for Books or papers on Ornithology, Wood's Natural History specially desired. E. W. MERCER, 136 Mulberry St., Buffalo, N. Y.

DEAR SIR: I enclose herewith "copy" for an exchange notice which I would like to have inserted in next issue of the OÖLOGIST. I enclose herewith my payment for same 50c. in stamps. I find that an exchange or want notice in your magazine always brings more replies than from any paper I've ever tried. Very truly, THAD. SURBER, White Sulphur Springs, W. Va.

FOR SALE.—To the highest cash bidder, nine tons of type; some almost new. Also collection of minerals; some rare specimens. For particulars apply to R. T. YOUNG, Chestnut Hill, Phila., Pa.

ON SALE.—The whole remainder of the choice collection of Mr. F. T. Jencks, late Southwick and Jencks, at lowest prices ever quoted. Also my duplicates. These are mostly fine specimens, selected from a large stock. Send stamp for list. P. B. PEABODY, Owatonna, Minn.

WANTED.—For Choice Eggs and Skins; sets (with nests preferred) of 1, 12, 141, 148, 164, 184, 185, 186, 211a, 223, 277a, 289a, 292a, 293, 295, 300c, 307, 307b, 310a, 332, 362, 368a, 373a, 375a, 377, 385a, 387a, 33c, 302a, 408, 414, 416, 434, 445, 459, 461, 474, 474c, 478, 480, 482, 486, 490, 494a, 501a, 504b, 506a, 501, 502, 503a, 507a, 581a, 581b, 581c, 581d, 580, 587, 625, 629, 635, 636, 637, 667, 675, 715, 717, 718, 726, 727a, 728, 735d, 738, 742, 743, 745, 746, Send Lists, Procurables, Desiderata. P. B. PEABODY, Owatonna, Minn.

NAPHALEIN CAMPHOR MARBLES. A large box of 50 marble's. The neatest and handiest article ever made, to lay around in Specimen Trays, Cases and Cabinets. Said to be a sure preventitive against Moths and Insects. Price per pair only 15 cts. FRANK H. LATTTIN, Albion, N. Y.

FOREIGN STAMPS and PUBLICATIONS. Special prices to close out. 50 var. 6c.; 100 var. 10c.; 500 mixed 10c.; 1000 mixed 30c.; 1000 *finely mixed* 10c.; 500 *finely mixed* 90c. Philatelist's albums, boards and cloth, 16 pages, 2000 spaces, illustrated 2c.; Popular album, for beginning, linen boards, 1200 spaces, 10 pages, illustrated 10c. Merchants Flags of the World, per set 20c. Portraits of Rulers per set 35c. Coats of arms of the World per set 35c. Standard Color Chart, per copy, 40c. Scott's Catalogue (62d edition) over 500 pages, fully illustrated 35c. Gummed Hinges, per 100, 5c. Blank approval sheets, ruled 50 spaces, linen paper, per 10, 5c. Approval sheets each containing 50 var. stamps, 5c. 2d hand International album (6th ed.) with set of Hamburg Locals, 6c. International album (7th edition) 2d hand 6c. All prepaid. FRANK H. LATTTIN, Albion, N. Y.

COLLECTORS, ATTENTION!—Collectors having duplicates of Eggs to dispose of should communicate with me. Eggs bought by the 50's and 100's. Noddy, complete data, given for every set Anna's Hummingbird n-2. Noddy and Sooty Tern complete data for each set Black-chinned Hummer n-2. Address LAFAYETTE G. DURR, 1716 West End Ave., Nashville, Tenn.

BRAVSS BLOWPIPES. We have just received a new lot of blowers and offer them at following prices: will remove tip for blowing large eggs, if you wish without extra charge. Prices each: 70c., long 15 cts., 8in. 20c., 10in. 25c., 14in. 35c. FRANK H. LATTTIN, Albion, N. Y.

HEET PEAT.—An important article used largely by "Bug Hunters" as a substitute for cork. Size 4x2x1/8 in. Sample sheet 8c., 12 for 50c., prepaid. FRANK H. LATTTIN, Albion, N. Y.

FRENCH MOSS.—We have just received a new lot from Germany. Dyed bright green in "beads" 1x1x5 in. All Taxidermists use it and pay 20 percent more than we charge. Sample package prepaid only 15 cts., 1 doz. prepaid \$1.00. FRANK H. LATTTIN, Albion, N. Y.

WANTS an **UFOR SALES**.—Shall need during the coming season the following eggs, in sets: Loon, Black Gull, Murre, Auks, Caspian, Royal and Cabot's Terns, Skimmers, Yellow-nosed and Sooty Albatrosses, Flamingo, Spoonbill, Whooping and Sandhill Cranes, Turkey and Black Vultures, Sharp-shinned Hawk, Golden Eagle, Sparrow Hawk, Caracara, Osprey, Horned Owl, Chuck-will's widow, Whippoor-will, Parauque, Ruby and Anna's Hummers, Crested Flycatcher, Wood Pewee, Great-tailed Grackle, Boat-tailed Grackle, Phainopepla, Maryland Yellow-throat, Cactus Wren, Brown-headed Nuthatch, Wren Tit, and Verdins. Some of above wanted in large quantities; will exchange for same a fine list of American sets, also a full list of desirable and very showy foreign sets, as: Griffon and Egyptian Vultures, Duck Hawk, Rough footed, Imperial and Oriental Eagles, Black kite, European Kite, Golden-crowned Kinglet, Ruby-crowned Kinglet, Great Titmouse, Garden, Orphean, Wood, Baird, Melodias, Black-capped, Willow, Rufous, Reed, Marsh, &c., Warblers, Cape caille, Quail, Great and Little Bustards, Temminck's Stint Piper, Cinereous Crane, Nymidian Crane, Black-throated Diver, Large-billed Puffin and a great variety of others, will also purchase for cash if price meets my approval and specimens are good, sets of Loon, any of the Albatrosses, Whooping Crane, Sandhill Crane, Sharp-shinned Hawk, Golden Eagle, Chuck-will's-widow, Whippoor-will, Parauque, White-tailed Kite; also back numbers of the *Auk* and *O. O.* By the middle of April I will send a very large order to Europe, and any one desiring some fine European eggs at bottom prices I will be pleased to give them the benefit of the very cheap rating that I have secured. Following is a sample of the prices per egg, all in first-class authentic collections or singles: Greenland Gyrfalcon .40, White Gyrfalcon .35, Gyrfalcon .25, Duck Hawk .10, Merlin .25, Gray Sea Eagle .10, European Buzzard .15, Goshawk .30, Rough-legged Hawk .25, Tengmalm's Owl .10, Richardson's Owl .10, Short-eared Owl .25, Lapp Owl .25, Creeper .10, Siberian Tit .10, Golden-crowned Kinglet .25, Ruby-crowned Kinglet .25, Bohemian Waxwing .10, Nutcracker .35, Raven .50, Wheatear .05, Red-winged Thrush .15, Red-spotted Bluetroat .30, Dipper .25, White Wagtail .05, Meadow Pipit .06, Red-throated Pipit .05, Skylark .35, Snowflake .25, Lapland Longspur .30, Hofboel's Redpoll .50, Parrot Crossbill .15, Common Crossbill .00, Rock Ptarmigan .25, Willow Ptarmigan .0, Black Grouse .25, Pheasant .42, Golden Plover .20, Ring Plover .08, Little Ring Plover .15, Turnstone .85, Oyster catcher .12, Stilt .25, Avoocet .20, Dunlin .15, Green shank .15, Green Sandpiper .25, European Woodcock .10, Broad-billed Sandpiper .100, Black-tailed Godwit .18, Whimbrel .15, Glossy Ibis .25, Rosette Spoonbill .40, Spotted Crake .15, Whistling Swan .100, Mallard .10, Pintail .15, Gadwall .30, Widgeon .10, Shoveler .24, Rufus Crested Duck .50, Scap Duck .25, Golden Eye .25, Barrow's Golden Eye .25, Harlequin Duck .10, Velvet Scoter .30, Goosander .25, Red-breasted Merganser .12, White-winged Black Tern .5, Little Gull .35, Glaucous Gull .35, Fulmar .25, Stormy Petrel .30, Red-throated Diver .30, Black-throated Diver .30, Large-billed Puffin .25. Price includes delivery to your address. I have a list of over 500 species to choose from. Collectors desiring any of the above please communicate with me at once. C. W. CRANDALL, Woodside, Queens Co., N. Y.

WANTED Marsh Hawk 1-6, first-class data complete identity guaranteed. Will give Florida Cormorant 1-4 and Mew Gull 1-4, full data first class. F. A. PATTON, Drawer 35, Hamilton, Canada.

OFFER—For the next sixty days, I will send \$1.50 worth of minerals, fossils, shells, arrow-heads and curios for \$1.00 each. \$1.25 worth for every \$1.00 worth of *good* arrow-heads sent me, GEO. W. DIXON, Watertown, Box 381, S. D.

FOR SALE—A 10B gauge single barrel breech loading shot gun and outfit in good condition, what am I offered? For particulars, address L. N. ROSSITER, Lake Forest, Ills.

FOR SALE—A live Golden Eagle in good health. Will sell cheap. For further particulars, address R. M. HOWE, Bloomington, Ind.

FOR EXCHANGE—Volumes 63, 64, 65 of "Youth's Companion" and Volume 8 *Oölogist*, also numerous other oölogical papers, for eggs in sets. Rare or common. WALTON MITCHELL, 534 Summit Ave., St. Paul, Minn.

TO EXCHANGE—Eggs in sets for old U. S. postage stamps, rings, curiosities, relics, books, and papers on Ornithology and Oögy. Send lists with values and receive ours. C. & W. STARK, Buffalo, N. Y.

FOR SALE OR EXCHANGE—Fine large fruit plants, (true to name), for good detective Camera, 4 x 5, field glass, new climber's (Lattin) first-class eggs not in collection. Exchange Lists. TOM TULLOCH, Box 1620, Rockford, Ills.

BICYCLE for good books on Ornithology, 60 brass shot-gun shells, 12 gauge microscope, saddle, Wood's Natural History. Stamps for eggs, skins, Taxidermist tools. W. A. CHINSON, 123 W. Brooks St., Galesburg, Ill.

PLEASE STOP MY EXCHANGE NOTICE AT ONCE. You can talk about your papers, but I never saw any that could hold a candle to the *Oölogist*. I have exchanged \$0.00 worth of stamps just by putting in that little Ex. notice. CHAS ACEY WHITE, Omaha, Neb.

ERRATA!—Will you please correct a mistake which was made in my notice in *Oölogist* in your next issue? The last No. should have been 758 and not 758a. Through my notice in the March, '92, *Oölogist*, *I received nearly forty replies, and exchanged over \$100 worth of specimens*. WALTON MITCHELL, 534 Summit Ave., St. Paul, Mo.

NOTICE—Every person sending me 50c will receive by return mail an adult male and female skin of Buff-bellied Hummingbird. Send for cheap price list of skins. J. CLAREWOOD, 101 Abbott St., Detroit, Mich.

WANTED—A first-class side-brown egg of Dusky Horned Owl. Will pay cash for same. E. B. SCARAGE, Pontiac, Mich.

WANTED—Standard Color Chart and "Tracy's Key." Can give stamp sets, arrow-heads and collectors' papers. SAMUEL H. ROBBE, Belleville Wayne Co., Michigan.

WANTED—Wayandotte chickens in exchange for bird eggs, skins, mounted birds, or part cash. I will also exchange eggs and skins for same, first-class only. JESSE T. CRAVEN, Box 41, Huberton, Orleans Co., N. Y.

TIN COLLECTING CAN, lined with bale and cover, easily carried in the pocket. Filled with cotton you will find it almost impervious to lowering specimens from tall trees. Sample prepared only 12cts. Larger size 15cts. Lots. A .011 drab lining on winter to use with either 8 sets. FRANK H. LATIN, Albion, N. Y.

New Standard Catalogue
OF
North American Birds Eggs
COMPILED BY

FRANK H. LATTIN,

Assisted by Capt. Chas. E. Bendire, J.
Parker Norris, Esq., and
Capt. B. F. Goss.

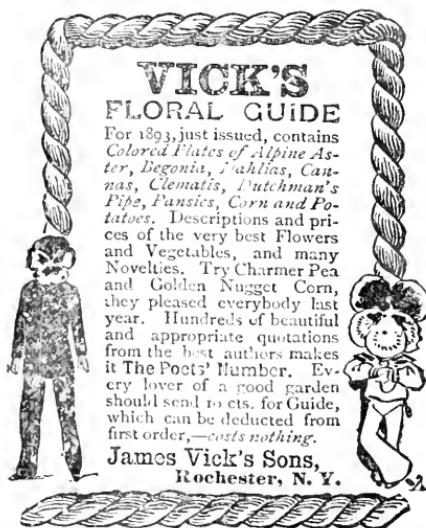
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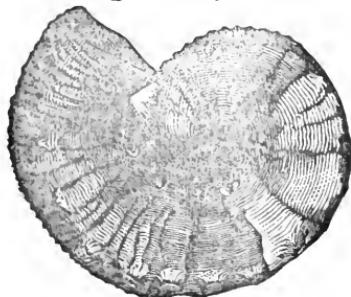
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Dear Sir: I have read your book, and I am forced to confess that it has given me a great deal of pleasure, not to speak of the information that I have derived from it. Send me another copy, best edition, and if you should ever write another book as good as this, and as reasonable in price, I would thank you to let me know. I wish you many kind wishes on your expedition next spring to the North.

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Dear Sir: I have just finished reading your book and am delighted with it. I would not have missed it for double the price. The plates alone are worth the price of the book, and some of the pen pictures are grand. Every lover of nature and sport should read it. Yours, &c., J. W. BANKS.

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Dear Sir:—I received your book O. K., and after looking it over, am agreeably surprised and more than satisfied. The profusion of illustrations adds greatly to its interest.

Yours, C. O. TROWBRIDGE.

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Dear Sir:—Bird-Nesting in North-West Canada was duly received, and I am very much pleased with it. The plates of Birds Eggs are equal to any I have ever seen.

JEROME TROMBLEY.

BALTIMORE, MARYLAND.

Dear Sir: I received a copy of Bird-Nesting in North-West Canada bound in cloth in exchange for the paper copy returned. I am more than pleased with the book and hope to soon send for two more copies for my friends. Yours, &c.,

WM. H. FISHLER.

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Dear Sir:—Bird Nesting in N. W. C. received. I am very much pleased with its contents and its fine illustrations. It should be in the hands of every Oologist, as it gives so fine a description of the nesting grounds of so many of our migratory land and water birds.

Yours Fraternally,
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Dear Sir:—Your book "Bird Nesting in North-West Canada" received in good order, and I have almost read it through. I think it the most interesting book on Oology that I have ever read. I am more than pleased with it, etc.

D. W. RAYMOND.

DURHAM, ENGLAND.

Dear Sir:—The perusal of your book has given me great pleasure. Though I am what might be termed an ornithological veteran in the field, having used the gun as a sportsman and collector over 60 years, I often felt ready to join you in the many rambles where n^o you were so successfully rewarded, and you can imagine the effect as I followed the details of your w^or^dy picture, etc.

JAMES SUTTON.

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THE OÖLOGIST.

VOL. X.

ALBION, N. Y., MAR., 1893.

NO. 3

Chat and Cliff Swallow.

The thrifty backwoods housewife, when she has a few apples and a few currants, contrives to make a pie by combining the two. Readers, will you have a slice of Chat-Swallow pie?

A late writer in the "O." states: that although the Yellow-breasted Chat is very abundant in her locality, she has never yet discovered the nest. I don't wonder. For two years I searched faithfully the dense copes along the Neosho River in Eastern Kansas for nests of the noisy and ubiquitous Chat. The second year, I found two. The first was in a dense bush close against a leavy osage hedge; and about three feet up. Contents: three newly fledged young and one handsomely spotted egg. The nest was found by accident, purely.

Nest number two was seated in the sparse top of a scrawny bush, six feet up the bush standing quite alone in an open woodland beside the river.

Father Chat was guarding the nest and its contents,—a swarm of ants,—with jealous wrath. Hence the discovery. This location was a very unusual one.

In 1891, I found many nests. Concerning these, I will let my Field Book tell its rambling story.

I—May 29, Nest, of sticks and leaves, lined with rootlets. In dense copse near water, a low bush. One egg, and three Cowbird eggs. Incubation advanced.

II—June 1, Nest, among black-berry vines in orchard one foot up, of stems and grasses, lined with fine grasses. Four eggs, and one of Cowbird. Fresh.

III—June 1, nest, in dense osage

hedge, border of orchard, three feet up as above. Three eggs and one of Cowbird. Fresh.

IV—June 5, nest, in bush and vine, standing alone in clearing, three feet up, a fine typical specimen. Four eggs and one of Cowbird. Fresh.

V—June 12, Nest, three feet up, in a hazel copse. Flimsy, of leaves and grass. Deserted. Three eggs and one of Cowbird. One egg in nest, two on ground, one partly eaten, and the Cowbird egg also partly destroyed, on the ground.

Other nests, found, were deserted. Some contained an egg or two, but most were empty. These observations give the following data:

The typical nest of the Yellow-breasted Chat is large and broadly cupped, like a Cardinal's nest but deeper. Materials, externally, coarse stems, leaves, paper, sticks; second layer, leaves, flatly laid. Lining sparse, fine grasses, in one instance a little horse-hair. Location, generally about three feet up in a vertical crotch or among dense branchlets. Almost invariably well concealed. Where available, "vine-tangles" seem to be preferred to any other location.

Locality, the thickest copes to be found near wooded streams. Kansas nesting Date, first three weeks in June. Eggs normally dull crystalline white, speckled finely with cinnamon. The specks are often assembled about the large end of the egg. One specimen, found on the ground under a deserted nest, is rosy tinted and exquisitely marbled with cinnamon.

The Chat is an especial victim of the Cowbird. Considering the well-hidden location of the nest, is this not strange?

In case of the nests of the Chat as of other birds that are imposed upon by the Cowbirds, an egg or two of the builder of the nest will almost invariably be found on the ground under the nest, after the Cowbird has done her work.

These eggs are generally beak-chipped and there seems little doubt that the Cowbird not only usurps the nest, but sneaks the eggs of the birds whom she chooses as the foster-parents of her young. Though cleverly hidden, the Chat's nest is not hard to find—after you have found one:

Go into a thicket,—listen; if you hear a Chat who seems drunk, and who also becomes crazy as you approach his favorite copse, mark the spot, search well the nest is before you.

Now for the Swallow portion of our "pie": During my trip to Kansas, last June, as my host, the genial ranchman and I were galloping across prairie and over hill, en route for the haunts of the Mississippi Kite, I noticed that troops of Cliff Swallows attended us everywhere, which I wondered at, not having noticed any nest upon the barns in the little town which we had left far behind us; and knowing that in all that wild, broken region of the gypsum hills, there were no barns, worthy the dignity of the name.

But, the canons reached, there came a solution. My broncho had just landed me across a creek, with a few vigorous buckings of remonstrance, when I chanced to turn and fasten my eyes upon a high bank some eighty or one hundred feet in altitude, its surface composed of the prevalent brick clay of the Medicine River region, interspersed with thin strata of crystalline gypsum.

Just a clay bank, but what was the matter with it? Warty, honey-comby in patches! ah, there breed the Cliff Swallows!

One little cluster of two hundred nests or so near the upper left-hand corner of

the cliff; another, half way down; a larger square one, near the right, and a little lower; a little cluster very near the surface line one-third of the way up to the left; and a large colony to the right of the center of the cliff and reaching to within six or eight feet of the pile of crumbled clay which might be called the bottom of the cliff.

Jack-knife in hand, I climbed, by niches cut over the gypsum strata until I could barely reach the lower nests. How I ever secured my four handsome sets of eggs will never be told—nor can be. Most of the nests were gourd-shaped, those that were not being such in the main, as filled up the interstices. All nests were of the red clay, and were sparsely lined with grass. Occasionally a straw was worked into the masonry and many nests were fastened to the under side of plates of gypsum from which the clay had dissolved. "How many nests?" I counted seventy-five in one corner of the larger colony. As nearly as I could calculate, there were between two thousand and three thousand nests, in all.

All these nests had been built within two weeks, a heavy rain just preceding that time having cleared the cliff. A typical nest, with its gypsum roof and a straw or two inwrought now lies on my mantel. I carried it, cotton swathed in my tin collecting box, on my broncho's back, seven miles at a keen gallop through driving rain, my beast once bucking forty rods at a stretch, as my slicker flapped her flanks. I was drenched; but the nest was safe. Is it not a treasure among treasures?

P. B. PEABODY.

A Hartford, Conn., Collector asks: "Why can't H. H. D., of Phoenix, Ariz., take a step ladder with him in a wagon?" in reply to the "Wanted Advice" article in January OÖLOGIST.

The Herons of Michigan.

There are seven* species of Herons known to our state, as follow: Great Blue, *Ardea herodias*; American Egret, *Ardea egretta*; Snowy, *Ardea candidissima*; Green, *Ardea viridescens*; Black-crowned Night, *Nycticorax nycticorax naevius*; American Bittern, *Botaurus longitignosus*, and Least Bittern, *Ardeola exilis*.

GREAT BLUE HERON.

This is our commonest species and is very generally distributed, being found throughout nearly the entire length and breadth of our state and in both peninsulas. It is not affected by civilization to any great extent, although of necessity a bird of this size shuns too well peopled sections. It is not a recluse and yet it is often found feeding in quarters far removed from the habitations of man. Where fish are found plentiful in lake or stream there the Gt. Blue Heron, or Crane, as it is often and improperly called, will also be found. I have found it breeding in several colonies or heronries as these gatherings of nests are called. These nesting sites are always chosen far from the habitations of man, as the birds prefer isolation during the nesting season, though often found fishing in the neighborhood of thickly settled quarters. After a nesting site is selected however, it is exceedingly difficult to drive the birds from it, and the herons will continue to build and rear their young in the face of extreme persecution. It is only after long and continued suffering that the Herons of this species will vacate a herony and seek other quarters. I know of two craneries which have been so deserted, and the bulky nests, gradually

wearing away remain for many years as an evidence of a former Crane village.

I have visited heronries of this species which embraced only thirteen nests in five trees, and again have seen as many as two hundred nests, new and old, in one group. It is more common I imagine to find these large villages than the small ones, if the birds are not disturbed. Information has reached me of some immense heronries of a thousand nests, but I have never seen one of them. I have visited villages in Van Buren, St. Joseph, Barry, and Ottawa counties, and at present there is evidence that the birds formerly colonized in Kalamazoo county within a few miles of a populous city.

The nests, huge, bulky structures, are invariably placed in the upper branches of lofty trees, and the sycamore, *Platanus occidentalis*, is most often selected, and not rarely an entire colony of nests is built in these trees. However a few nests are generally placed in other trees, and I have found nests in huge elms, in ash trees and once in a timber oak. The number of nests in one tree varies from one to sixteen, yet it is unusual to find a single nest or more than ten, while the usual number in a fair-sized herony is six or seven. The average height at which they are placed in the sycamore is seventy feet. The nearest to the ground being rather over fifty feet, while the highest was quite ninety feet up.

To secure the eggs is a skillful matter not unattended with danger, for the great trunks of the sycamore often ascend fifty feet without a limb and are nearly as smooth as a board. The work of climbing out to the nests on the long smooth limbs, is not the least part of the undertaking. The limbs twenty or thirty feet in length, and exceedingly uncertain footing, even for the most expert climber with the sharpest of spurs are covered with the limey excrement of the birds, which renders them doubly

*Some lists embrace two others and even three other species have been suggested. Enough proof to convince me that the Little Blue, Louisiana and Yellow-crowned Night Herons are Michigan birds, has not yet been adduced.

ly treacherous, especially on a rainy day.

It was on such a day, the 9th of May when K. R. Willhelm and I proceeded to lay in a supply of eggs of this species after camping out in the woods on the banks of the St. Joseph river. Though something of a climber myself for high nests in my day, I went on this excursion simply as a helper, yet with the prospect of taking notes and sharing in the eggs.

It was simply marvelous to see this man ascend those smooth boles and go out on the long slippery limbs. All this too with celerity and without a failure to secure all the full sets. In one instance he spurred up a smooth sycamore, ten feet and seven inches in circumference at three feet from the ground made a personal inspection of each of the sixteen modern nests, collected eleven complete sets of eggs, aggregating forty-five eggs, which he lowered to me in two hand-basketfuls and returned to the ground in one hour and twenty minutes. In this way he collected nearly two hundred eggs out of six trees, all of which were sycamores excepting one giant elm about eleven feet in circumference. Four eggs seems to be the usual number, though there were several sets of five, and two sets of six. It is a singular fact that the eggs are considerably smaller than those of the same species found in Florida, while a set of eggs from that state embraces but three.

Many nests visited on May 9th contained young birds of quite three weeks which raised considerable clatter when the old Herons hove in sight with food, while fully one-fourth the nests were either empty or contained one to three eggs. The very young birds were fed by disgorging, but the larger young were fed entire fish, a change according to requirements which agrees with the habits of the young pelicans which I have observed in Florida. The old birds often fish in the night, at least when rearing young. When camped near a large heronry we could hear the

old ones arriving as late as 10 p. m., and the young birds would immediately raise their clatter for food.

The Great Blue generally arrives front the South about the middle of March, but is sometimes a little later, and again in advanced seasons in the early part of the month, or late February. It does not take its departure till late October, and may sometimes be seen in December.

It is undoubtedly a very destructive species to our fishing interests, as it feeds largely on small fry, and necessarily does incalculable damage. It also feeds on craw fish as I have proved by dissection. I tried to eat the eggs boiled, but found them strong and entirely unpalatable. The Great Blue Heron has an extremely gutteral note, but the young ones have a monotonous clatter which would make a horse fiddle turn green with envy.

AMERICAN EGRET

Also called White Heron and Greater Egret. I know very little comparatively about this species. I do not recall having seen it in the months of May and April or in September and October. However, it is not uncommon occasionally in summer. Twice during the month of July I have known it to be quite common. Have also seen it repeatedly in August. Whether it is a straggler to our state from the south after the nesting season, or a regular nester to the north of us I cannot say. It is a beautiful bird, and is indeed a grand sight when seen stalking along the marshy edge of lake or river, or intently watching for its prey, its snowy coat glistening in the sun's rays.

SNOWY HERON; LESSER EGRET.

Much rarer than the last. It is recorded by several lists in the state, but personally I know nothing of it. It probably may be considered an occasional straggler from the south.

GREEN HERON;

Also called Shytle-poke and Fly-up-

the-creek. A demure and interesting little bird which it is pleasing to watch. Arrives about April 15th and remains till October. Generally gregarious to the extent of two or three pairs, but sometimes six or more pairs may be found associating; this more often during the breeding season. However single pairs are not rarely found breeding.

I have never found the eggs but I have had the colonies of nests shown to me. These heronries are never far removed from water, and are not rarely found on the banks of small streams in rather retired situations. The birds seem to prefer streams to standing water and I do not know of an instance where the nests were built far from river or brook.

The nests are quite bulky structures, composed of twigs, and are generally built in thick bushy shrubs or small trees, and never at any great height.

I have never seen a nest at a greater elevation than fifteen feet, while one nest found in a willow, was not above four feet up. The eggs are greenish blue in color much resembling the eggs of the other Herons, and may be fairly described as enlarged editions of the Cuckoo's egg, both as to form and color.

The Green Heron is very retired and as he is usually silent he is not generally seen. It is only by accident, as we are trouting, botanizing or more likely eggling, that we meet with him, and then true to his name, he will most always fly up the creek. Sometimes they make a great hullabuloo and can easily convince us that they are far from being a silent bird. The note is gutteral and something like the ravens *cruck* *cruck*.

The most grotesque scene I ever witnessed in birddom was an instance where a love-struck gallant shye-poke was making avowals to his inamorata perched on a rail fence along side of a pond. It was a comical sight to see

these long-legged ungainly birds prancing along the top rail, and often scrambling in a most ludicrous manner when liable to lose his footing. If they are not picturesque in appearance when attempting to strut about on a rail or limb they make amends for the deficiency when wading about the streams. In this situation they are at home and present a very pleasing sight as they solemnly wade about in search of their prey.

BLACK CROWNED NIGHT HERON; QUA BIRD.

Not rarely found in certain parts of Michigan, south of 44 degrees, north latitude, according to several state authorities. However I have failed to find it in my researches and therefore must consider it a locally distributed bird, and not of general dispersion like the Great Blue. It breeds in colonies in our state as it does further east and south.

AMERICAN BITTERN; INDIAN HEN; PLUM PUDDEN; THUNDER PUMPER.

This species is universally known to collectors in Michigan and is only second in abundance to the Great Blue. It breeds in our marshes and its eggs may frequently be found by watching the old birds, where their presence was not looked for. The nest is always placed in a marsh, generally near the edge of a lake or pond, the species unlike the Green Heron, preferring sluggish water courses or swampy ponds to rapid streams.

The structure is of coarse rushes and sedges and lined with grass, and is built up from the usually partially inundated marsh surface to a height of eight inches or more. The eggs, four in number usually, occasionally five, are coffee colored and are radically different from the eggs of all Michigan birds with which I have met.

The nest is built in late April or May and the young are found in early June.

Mr. Louis Kellogg found three nests containing eggs near Kalamazoo in May 1892.

These nests were not far apart, showing conclusively that the species, as with other members of its family, is at times gregarious.

The song of the Indian Hen is decidedly peculiar, although it certainly cannot be called melodious. However it undoubtedly answers the purpose of the performer, in charming the lady in the case, during early courtship, or in cheering her while engaged in the confining duties of incubation. Sometimes one can hear an irregular gutteral sound issuing from the throat of the bird, and this is undoubtedly its effort at social conversation, as it, like the call note, is common to both sexes. The regulation vernal ditty is *plum pudden* uttered in a loud resonant key, and which can be heard for nearly a mile on a clear, quiet morning. These notes, so plainly uttered, and from which the bird receives one of his characteristic names, are repeated from four to eight times, generally six or seven. Another sound produced by this singular marsh inhabitant, so nearly resembles the noise made by pounding with a maul, *ka whack*, that our friend has added to his list of names that of Stake-driver.

These sounds are issued with apparent effort, the bird going through grotesque contortions as an accompaniment, and from the peculiar motions this bog-trotter has been called Thunder Pumper.

The Bittern does not wade as much as the other Herons but stalks along the banks like a sentinel. It is a great destroyer of fish, but also feeds largely on frogs. As the chilly nights of October come on the Stake-driver seeks southern resorts and is rarely seen after Nov. 10.

LEAST BITTERN.

This silent, retiring little bird is but little known to any but enthusiastic col-

lectors and close observers. It is the smallest of the group in Michigan and the most handsome in appearance if we except the Egrets. The Least Bittern is very retiring and unless search is made for it in the marshy tracts about the lakes and ponds its presence will never be recognized.

It arrives in April or early May and begins nest building oftentimes by the middle of the month. The proper time to hunt for the full sets of eggs is about June tenth, yet I have secured incubated eggs in May. The average nest holds five eggs while several nests contained six eggs of a pale blue color, and one complete set only held four.

The color is much lighter than in the eggs of any other Heron here and the eggs are very nearly, often perfectly, elliptical.

The nest is sometimes built on a tussock of grass, the support being furnished by the coarse grass which is bent down by the birds, but much oftener the frail structure is entwined at its sides with the uprights of rushes, the stalks of the cat-tail flag, *typha* being frequently selected. The nest is composed of coarse grass woven together in a very shiftless manner. It is nine or ten inches across and is nearly flat, in fact barely enough of a hollow to secure the eggs.

Almost invariably the structure is partially covered by a flimsily constructed canopy for concealment, and at times this makes it rather difficult to find, especially if the old bird is not at home. When the bird is on the nest it is an easy matter to secure her and the finding of the eggs is no trouble at all, as she flies away in plain sight generally. Occasionally an attempt is made to escape in the grass, but this is usually clumsily done and I have known the bird to be caught in the act.

So far as I know the Least Bittern is silent and has not been known to utter a sound even when captured. It

is undoubtedly a feeder on small minnows.

I know nothing of the autumnal movements of this little species, but have seen specimens still here in September.

SCOLOPAX.

The Winter Visitors of Central Park, N. Y.

Central Park is situated in the centre of New York City and appears to the birds on their fall migration as an oasis does to thirsty men in the desert.

Here our little feathered friends stop on their long trip towards the sunny south for a few days recreation and pleasure before they again take up their long and tedious journey.

Many of our birds after stopping with us for a few days find such an abundance of food and so many sunny little nooks in which to make themselves comfortable upon a cold morning, that they decide to stay with us during the long winter months.

A person while walking in the Park upon a cold morning is sure to meet with some of these cheerful little visitors.

He cannot certainly go very far without seeing our bright little friend, the Chickadee who seems to be ever present uttering his shrill little call, and if he takes the trouble to look sharply among the branches of the surrounding trees he will probably see the White-breasted Nuthatch, Brown Creeper or Downy Woodpecker diligently searching for his breakfast.

Here also are found large flocks of White-throated and Fox Sparrows who seem to take great delight in scratching among the dead leaves.

Flocks of Cardinal Grosbeak's are often seen flitting among the leafless branches, their scarlet plumage showing to great advantage against the leaden sky.

If one looks sharply enough along

some frozen water course, or among some pile of stones he will perhaps see the little Winter Wren silently hunting for his breakfast and looking very contented in spite of the cold.

A few Robins, Thrushes, Song Sparrows, English Goldfinches, and one lonely Mockingbird make the Park their winter home.

One cold winter morning as I was observing my little friends I saw a Thrush pluming himself upon a small bush and stopped to watch him.

I had not been there very long before the little fellow darted off and flew at a branch of a small red berry tree nearby knocking the snow off in showers and with it a few of the berries, but before these dainty little morsels had time to bury themselves in the snow the Thrush caught them in his bill and quickly disposed of them.

Then returning to his perch he went on with his morning toilet seeming satisfied with his frugal breakfast.

Very often of an evening when the thermometer stands at a few degrees above zero I wonder how my little friends can stand the cold, but the next morning as I take my daily walk in the Park I find them as cheerful and contented as ever.

WILLIAM Y. HAWLEY,
New York City.

Another Day with the Birds of Southern California.

One evening early in May last my friend came around to see me concerning a trip down the coast about sixteen miles, after Great Blue Herons' eggs, which birds he had been informed had a rookery in that locality. Although I had some misgivings that it was too late to find Herons' eggs, yet it was a favorable spot for various of our smaller birds to breed, it was decided to give it a trial. We concluded also, to drive down the next Saturday evening

and stay over night, in order to have more time to devote to our search.

Accordingly the latter part of the following Saturday afternoon found us on our road, provided with a corpulent-lunch basket and a blanket apiece, which were stored away under the seat. We arrived after a long, dark and not over warm drive as near our destination as it was possible to take a team, and with considerable trouble succeeded in finding a suitable place to camp. After building a small fire to warm our feet and selecting as smooth a spot as was possible in the dark, we rolled ourselves in our blankets and prepared for sleep. As this was our first night of camping out for the season, our rest as might be expected, was neither profound nor refreshing; but after waking up and turning over a score or so of times to ease the salient points of our anatomy, we were at length gladdened by the break of day.

As I lay on my back in a semi-conscious state, trying to get the knots out of my shoulders, and dreamily watching the sun creeping down the mountain side opposite, I became suddenly aware that a Rufous Hummer was greatly excited about something, and flying nervously about some blackberry vines not six feet from my head. This effectually waked me, and we were soon up. I found the nest after a short search and it contained two fresh eggs.

After swallowing a hasty breakfast we started down the canon following the stream. The canon was well wooded with oaks and sycamores, with a variety of underbrush, and as small birds were plentiful we were in high spirits. After going a few hundred yards my attention was attracted to a fresh looking Woodpecker's hole in a dead sycamore stub, and scrambling through a thick tangle of underbrush I reached it in time to see a California Woodpecker leave the hole. With

considerable exertion the ascent was accomplished, and five beautiful, fresh eggs secured. Shortly after my friend flushed a Red-shafted Flicker from a hole in a sycamore stub, and took seven perfectly fresh eggs, and not far away a set of three of Heermann's Song Sparrow, and three of California Towhee.

About this time we sighted our Herons' nests in some tall sycamores on the opposite of the canon. We immediately started across, taking a set of seven of Parkman's Wren on the way.

Soon after, while passing through a patch of blackberry vines I heard a rustle at my feet and immediately commenced a search, but not being sure of the precise spot, although I searched diligently, I was obliged to retire vanquished.

When we reached our rookery we found the ground under the trees covered with a tangle of pines, nettles, poison oak and weeds which almost defied our efforts to penetrate. We soon saw our nests; there were eight of them, and all in the tops of the trees. We lost no time but each took a tree and started up. After an extremely laborious climb, urged on by the tremendous noise made by the old birds, we finally reached our nests and peered into them. Young birds! I can't say I was exactly disappointed for I had half expected as much, but still it was rather disheartening; though the sight of those extraordinarily awkward and homely squawkers, with their very evident astonishment at our sudden appearance, was enough to highly excite one's sense of the ludicrous.

From our elevated positions we could see into several of the other nests and all contained young. In a nearby tree, and probably occupying one of the old Heron nests, was a family of young Red-tail Hawks, and while we were looking about us the old Hawk came swooping down with a defiant

scream, and instantly every mother Heron set up a deafening racket, and leaving their perches began flying wildly about, nor did they settle down again until the old Hawk had left her nest. I presume this show of activity was for the purpose of intimidation, but they must have been continually disturbed as she would return every few minutes. After watching the birds for a time we descended and made our way back across the canon. When passing near where I thought I had flushed the bird on our way to the Hercus' nests I thought I would see if she had returned to her nest. So slowly, and cautiously I approached the spot and was fortunate enough to see a Spurred Towhee slip silently from her nest, and I took four fine eggs. The nest was placed in the vines about a foot from the ground and was very well concealed.

A little later my companion took a set of eight of Parkman's Wren from a deserted Woodpecker's hole, and also found a nest of young Red-tails. Shortly after I took four fresh eggs of the Western Flycatcher, whose nest was built in the opening of a Woodpecker's hole, and directly over a stream of water. The nest was covered externally with green moss.

A fine set of four of California Woodpecker's eggs next fell to the lot of my companion. Our last find for the day was a Girdner's Woodpecker's nest, which was in the top of a rotten cottonwood tree and about thirty feet from the creek bottom. Although we made the attempt we found it was clearly impossible to make it without a mishap, and were obliged to leave it undisturbed, much to our regret.

This ended our finds for the day, and we soon left for home. Although so far as the primary object of our trip was concerned, it was an entire failure, yet we felt more than repaid for our trouble and I shall always remember it with pleasure.

HAROLD H. DODGE,
Santa Barbara, Cal.

The Loggerhead Shrike of Florida.

One of the best known birds of the Orange Belt or pine hills of Florida is the Loggerhead Shrike. On traveling along through the tall yellow pines of the shade hills or the dark green and much handsomer orange trees, ones attention is attracted by the scolding, noisy call of this bird in his favorite haunts.

This bird has various local names such as the Butcher Bird, Loggerhead, Flat-head and False Mockingbird, all of which apply very well to some characteristic of the bird. I think the name of Butcher Bird is most appropriate. It derives this name from its habit of impaling bugs, insects, lizards and even small quadrupeds (such as young rabbits) on thorns of bushes or trees.

A fact worth noting and one that I have never noticed in books on Ornithology, is that in all cases of impaling their victims containing animal life on thorns; they force the point of the thorn through the body just back of the shoulder.

This bird is very daring, reckless and warlike; pouncing on and destroying any small (and sometimes quite large) bird or insect that may be luckless enough to attract his evil attention. They are great birds for intimidating, and also seem to realize when any thing is so weakened as to become an easy prey.

For instance; a friend of mine while gunning shot and wounded a large Dove which is much larger than the Shrike and a good game bird with us at some seasons of the year. The Dove while "skating" was set upon by a Shrike, who started to pick out the eyes of the unfortunate dove. The pitiful look of the Dove and the audacity of the Shrike so moved the hunter that he shot the Shrike putting an end to the cruelty.

But the Loggerhead has some good points as well as bad ones. He has great powers of imitation and from this

he gets the local name of "False Mockingbird." I have often heard him singing so that one not accustomed to the two birds would mistake it for the song of the Mockingbird, the main difference being that the Loggerhead does not sing as loud as the Mockingbird. In fact his song is very low. I have noticed that the favorite perch of this bird as well as that of the Mockingbird is on the top of the highest chimney of some house, or the topmost branches of some tree. The Shrike, although it has the bill of the *Falco naevius*, has very small and clean cut legs and feet, thus it uses its bill only and not its talons in tearing its foods contrary to most birds of prey.

The breeding season starts in May, the same bird often raising two broods in one season. The nest is a bulky structure somewhat larger than that of the American Robin, composed of grasses, sticks, rags and paper lined with feathers, (usually small chicken feathers.) I have often found the lining of feathers so thick and loose as to almost or quite conceal the eggs from view. A favorite material used in the construction of the nest in Volusia Co., Fla., is the small stalks of the Dog-fennell.

I have taken most of my eggs from nests built in orange trees, the nest being on some branch where the leaves were very thick and from six to ten feet from the ground. A thorny tree is preferred as the male gathers food and impales it on thorns near the nest while the female is setting, thus the female is not long off her nest after the full number of eggs have been deposited. I have also found nests in small pine saplings, live oak trees and saw one in the top of a very high pine tree. A full complement of eggs is from four to six; usually six. From one nest however I took ten eggs by leaving a nest egg. The nest was in a large bushy orange tree and when found contained two eggs. I took out one and on

returning two days later found two. By watching the nest I found that an egg was laid every other day, which I continued to take until the tenth, when the bird refused to lay any more but started to set on the one remaining egg. I have tried this on other nests but never succeeded except in the above case. Some of the birds would leave the nest on the first eggs being taken, others after the taking of the second or third.

The Loggerhead is very noisy on the approach of persons to its nest and often betrays its location by its fear of discovery. When you disturb the nest the bird will dart savagely at you, and afterwards follow you for some distance from the nest scolding all the time.

The eggs are of a dull white or gray with pale purple or light brown irregular sized spots chiefly around the larger end. The average size of the eggs collected by me and now in my cabinet is .38x.70.

F. ADEE HULST,
Brooklyn, N. Y.
Formerly of De Land, Florida.

How to Prepare a Birdskin.

After the desired specimen is shot, carefully fill all shot holes and wounds with batting to prevent the blood flowing.

Then, when ready for operations, place the bird on its back, and by passing a narrow strip of plain paper around the body over the wings, take its girth so that the natural size may be retained after finishing. Pin the paper in this position and slide off over the wings. Make the first incisions about two-thirds the way down the breastbone, to the tail, being careful not to cut any of the abdominal muscles. Then push, not pull, the skin off the specimen to the knee joint, here separate leaving the leg attached to the skin, and in the same manner operate with

the wings separating at the elbow joint. Having finished this, skin over the head to the bill, pull out the ears, take out the eyes, and after cleaning well, sprinkle thoroughly with a mixture of arsenic and alum, equal parts by weight.

Remove the brain by making a small hole in the back of the skull, after powdering, amputate the head from the body. As a general thing the heads of web-footed birds are too large to be skinned in this manner.

In this case, skin the neck as far as possible, amputate and then an incision must be made below the throat or at the back of the head, which may now be readily worked upon. After this, proceed as with other birds, sewing up the incision carefully, and placing the feathers back, in their natural position. Powder the skin well, being particular to work it in, about the roots of the tail, wings and legs.

When the bird is large a slit should be made on the under side of the wing below the elbow, so that all muscles and fibers may be removed. After stuffing the wings with batting, previously well powdered, and tying the bones in their ordinary position, sew up the slit, smooth and place the feathers, stuff the neck, legs and body with cotton and sew up the first incision.

The bird should then be placed in the paper with a label attached, which should contain the scientific and local names of the bird, its length from tip of the tail to the end of the beak, its girth, food found in the stomach, its sex, date of procuring, locality and name of the collector and any other data he might see fit to put in.

If the feathers have become soiled by blood, freely apply warm water to the spots, and dry by sprinkling plaster-paris or chalk over them.

Oily spots may be removed by the use of a solution of potash or soda, say one-half a teaspoonfull to a glass of water,

and afterwards washing with pure warm water and drying as before. Where the feathers to be cleaned are colored, ox or sheep gall should be used, diluted about one-half with water.

If any feathers are bent, they may be straightened by holding them in steam for a moment or two.

Since our bird is finished it would not be out of place to tell you why we have prepared it. A earnest student of birds and their ways will find it of great advantage to procure a good set of bird skins; for by them he may readily identify birds and their eggs and also learn the usefulness or destructiveness of different birds.

J. ARTHUR WILLIAMS,
Galt, Ont.

A Trick of the Crow.

I have heard many stories of the tricks and thefts of crows but none I think are more extraordinary than the following true story. It happened several years ago and was like this:

My brother, then about seven years old, was sent with a dollar to pay the washwoman. She was not at home so he started to return.

There was a Crow sitting on the low roof of the house and as it seemed to be watching him he thought he would try to catch it. He tapped on the fence with the money and the Crow began to walk along the edge of the roof and finally jumped down to the fence and slowly walked toward him. He wasn't thinking of the money but of catching the bird. The Crow approached to within perhaps a foot of his hand and then suddenly jumped toward him and flew up on the house again,—taking with him the dollar. It sat there a minute gazing down upon him and then sailed away across the fields with the shining coin in his mouth.

My brother came home crying and

said Reaser's Crow, (for that was the man's name to whom it belonged,) had stolen the money and flown away with it. So much for the Crow—but now comes the funniest part of it. My mother thought it was a queer story and, when father came home, told him about it. The next day he met the owner of the Crow and jokingly told him about it. It was perhaps a week later when the man who owned the Crow stopped my father on the street and saying he had something for him handed him a silver dollar.

The Crow had carried it two miles across the fields to its home and had dropped it in a rain barrel that stood near the house. The man found it in the morning when he went to wash.

R. PAUL HUGHES,
Lima, Ohio.

Notes on *Cathartes Aura*.

The Turkey Vulture, or Turkey Buzzard, as it is commonly called, is an abundant resident here, and seems about as numerous at one season as another.

In this locality I think it has a decided preference for carrion, but in cold weather, when food is scarce it will eat fresh meat. They will sometimes, in company with Crows, devour the remainder of a chicken or rabbit killed by a Hawk, as soon as the latter has made his meal and left.

When a large animal dies, a hundred or more individuals will collect, dividing their time during the day, between eating and sitting on the nearest trees and fences; and at night roosting in an adjacent wood.

When they first find a dead animal they will examine it carefully, and if its condition is not satisfactory will leave, and return later. After the discovery of fresh meat, I think they will sometimes collect and wait for it to putrefy. I once found one, in winter that from

some cause was unable to fly, and on being caught it vomited something that looked like wheat or timothy heads and clay. (I was not anxious to examine it closely.) I suppose extreme hunger was the cause of its having recourse to this unnatural diet.

When captured in a steel trap, a Buzzard, if approached will never show fight, but will stick his head under his body or wing and lie as if dead. The only vocal sound I have heard them utter is a blow, sounding like that made by a sitting Turkey hen when she is disturbed.

On May 22, 1890, Prof. J. H. Langille and I made an excursion to the Patuxent river in search of a Buzzard's nest. We found it on the ground in a large Chestnut stump, on a steep hillside a short distance from the river, where there was a little oak timber and a dense growth of laurel brush. It contained two young, apparently about four days old, covered with white down, but with the fore parts of their heads naked and black, and a bare strip down the breast exposing a coal-black skin. The old bird would not leave her young, suffering herself to be pushed aside with a stick. While we were there she disgorged something which one of them commenced eating. I visited the place again June 1, and found them considerably larger, and partly covered with black feathers. On July 22, they were still in the nest, and did not look as if they would leave it for a week or two. The parent bird was not found on the nest when these subsequent visits were made. Visiting the place on April 19, '91, I took a set of two eggs, very slightly incubated.

On May 30, '91, my usual companion on collecting excursions, and I took a set of two eggs from a wooded hillside near the banks of the Patuxent, about a quarter of a mile below the first nest. They had been deposited on the ground under an overhanging rock, and were

slightly incubated. One of them was peculiar in shape, being equally thick at both ends. This set was probably laid by the bird whose nest I had robbed on April 19.

We took another set of two eggs on April 17, '92, near the Patuxent, about half a mile below nest No. 2. They were on the ground in a little cave under a rock, about six feet from its entrance. Incubation seemed to have been commenced, but the eggs were cold when found.

I have alluded to the "nest" of the Turkey Vulture, but in every case the eggs and the young were found on the leaves, rotten wood, etc., that nature had provided. Sometimes, but not always, a very slight depression had been made in the ground.

HAROLD B. STABLER,
Sandy Spring, Maryland.

The American Bittern.

Botaurus lentiginosus.

There is probably no bird so noted and famous, and yet, whose habits and appearance are so little known to the general public, as this incendiary bird I have under a bell-glass, besides a number of the smaller waders, a specimen of the Least Bittern and one of the American Bittern. The remarks made by those of my visitors not connected with our hobby, yet sufficiently interested to pay a little attention to birds are usually something to this effect. "What country did you get that bird from?" "You never got it around here," "What kind of a crane is that?" "Did you get the old one and young one together?" and one lady, referring to the small waders about, and supposing probably that long legs implied relationship, nearly drove me wild with the query "And is that old one the mother of them all?" and yet among those same people there was perhaps

not one, who could not repeat lines from many of the poets, referring to the Booming Bittern.

The Indian Hen, Bog Bull, Bog Trotter, Plum Puddin, Thunder Pump, or Stake Diver, arrives in Perth County, usually during the first week of April, but in one or two exceptionally cold seasons, I have not seen an arrival before the middle of the month.

Soon the mating season begins. Then Botaurus is constantly engrossed in endeavours to propitiate his loved one, and from this time till well unto the period of incubation, his peculiar love notes may be heard, issuing from the bog in which he proposed to make his home. Let us endeavor to obtain a peep at the lover while he sings his serenade. In order to accomplish this we must be very careful that he does not first get a peep at us, for Botaurus is too shy to sing before company. After quite a search we discover him standing in a shallow pool. He has been engaged in the pursuit of fish, frogs and other reptiles, which with insects form his diet. Suddenly he pulls himself together into a bunch, stretches out his neck in wavelike motions, and in a most methodical and apparently strained manner begins his cry, which sounds very like the syllables, *chunk-a-lunk-chunk, quank-chink-a-lunk-chunk*. We laugh outright at the performance—he springs into the air with a croak and laboriously flies off with his legs dangling down behind. My companion remarks that it would require very little practice to take that bird on the wing and we agree unanimously.

The nest, which is situated in the most villainous part of an almost impassable swamp, is composed of reeds, grasses, and a few leaves, and is, from its situation, usually damp and soggy. The nest is rather large, sometimes as much as fourteen inches deep, but usually not more than half that depth and has a cavity about as large as a saucer,

it is built upon low bushes, or in thick tufts of grass, in which latter case the weeds and grass are sometimes drawn together above the nest almost concealing it.

In this vicinity the eggs are as a rule deposited during the third week of May, although I find records in my note book of a set of three, partly incubated, which I took from a bog near here, on June 9 1890, and my friend J. S. Square has a set of four—incubation fresh, which he took June 15th of the same year,—and within thirty yards of the precise spot where I took mine. This seems a strange occurrence, considering the solitary and unsociable habits of the bird. They measure 1.90 to 2.00 long by 1.50 broad, and are usually four in number, but sets of 5 are very often, and sets of 3 sometimes taken. The sets of three, I might add, can usually be traced to the hands of a collector, who was unfortunate in not having discovered the nest a day or two later, or who had an accident before he got his set safely lodged in his cabinet.

A set also frequently shows great differences in incubation, the last deposited blowing fresh, while the first will give some trouble in saving it. The female sets very close, and will almost allow herself to be trod upon before rising. I have one in my collection which I pulled off the nest with my hands, and carried home under my arm. It showed considerable pugnacity while on the nest, rattling its feathers like a setting hen, and hissing after the manner of a vulgar barnyard goose, but unlike them she used her strong hard beak so effectively, that I don't care to capture any more Thunder Pumps, that are not *hors-de-combat*.

F. BAKER.
Stratford, Ont.

The Barred Owl.

Who has not been startled on a summer night by the unexpected cry of a

Barred Owl in a neighboring woods, amusing himself, apparently at your expense, with his laughing, mocking, inquisitive "*who, who? who, who? who are you?*"

At nightfall and early dawn these owls can be heard, during the breeding season, in nearly every deep woods in the United States, east of the Rocky mountains. From the amount of noise which they make, one thinks them very common and wonder why he so seldom sees one of them. The reason is plain. The bird is one of the shyest of the large owls, and keeps himself well out of the sight of man. At the approach of day he betakes himself to some hollow tree, there to remain in a half stupor until night's gray mantle effectually conceals his noiseless flight. If one climbs to his retreat, as I have frequently done, he will blink his big dark eyes, and snap his bill in a way which defies further intrusion.

This bird is often mistaken by the casual observer for the Great Horned Owl. Yet the distinction between the two is very marked. The Barred Owl is not quite so large as the Great Horned, has a much lighter plumage and a round head in counter distinction to the large tufts or horns of his relative. But in flight the two are very similar and can scarcely be distinguished unless very near the observer.

It is during the breeding season that we have the best opportunity for studying the habits of the Barred Owl. The nesting habits of the bird are similar to those of many of his relatives. For his home he generally selects a cavity in some secluded tree, although he is said to occasionally appropriate a deserted hawk's nest. I am inclined to think that only the want of a suitable cavity forces him to occupy an artificial dwelling. I have found him nesting in trees of every description, always in cavities ranging from ten to sixty feet from the ground. The only requisites

seem to be a reasonably large cavity in an out of the way tree. Yet the birds are very sly about their nest which is often quite hard to find. The very roughness of the occupied cavity frequently serves to draw away attention from the object of search.

A rap on the trunk of the tree, although it will generally bring out the bird, is not to be depended upon as a sure means of discovering the nest. In my experience, the bird will often retain her seat until you have quite reached the cavity. Again, she will occasionally hear your approach and silently slip from the nest before you are in seeing distance of her. The two finest sets of eggs which I ever helped to take were only discovered after climbing to cavities which had shown no signs of being tenanted. In one of these cases the bird had slipped away unnoticed; in the other case, she remained on the nest until my friend had nearly climbed to the cavity. What I consider one of the best signs of the proximity of an owl's nest is the presence of downy feathers sticking to limbs and bushes around a promising tree. Close inspection will frequently reveal small feathers clinging to the edges of the prospective cavity, which are almost a sure sign of a feathered inhabitant.

The nesting season of the Barred Owl begins the last of February and continues until May. The earliest eggs to come under my personal notice were a set of four nearly fresh, taken from a large sycamore tree, on the twenty-eighth of February, 1891, by Mr. O. K. Williamson and myself. I may well state here that Mr. Williamson and I have studied bird life and collected together for the two past seasons, and have shared each others oölogical labors, pleasures and disappointments. It is his experience as much as my own which I am giving.

The eggs of the Barred Owl are deposited in the cavity without any lining

except a few feathers from the breast of the mother bird. The female generally begins setting several days before the first egg is laid and retains her seat, perhaps relieved occasionally by her mate, until the rapacious appetites of the young require the combined labors of the parent birds.

When driven from her nest, the bird keeps a close watch and returns as soon as all is quiet. If hen's eggs have been substituted in the meantime for her own pearly beauties, the unsuspecting bird adopts them as her own. Mr. Williamson and I once replaced a set of two with hen's eggs and returned more than a month later and found the old bird patiently sitting on one decayed egg. The other had probably hatched, the young chick having either fallen from the nest or starved from lack of proper food. If one of an incomplete set be taken, the bird seldom, if ever, returns to finish the complement. Sets of two eggs of this owl are most common, although one frequently finds sets of three and rarely one of four. The eggs vary considerably in size, but can generally be distinguished from those of other species. A set of three in my collection measure respectively: 1.86 x 1.65, 1.90 x 1.62, and 1.90 x 1.59.

If unmolested the owls will occupy the same cavity year after year. If robbed of their first eggs, they always make a second nest three weeks or a month later. I have always found the second set in a different tree from the first. But if both sets are taken, the birds generally return the next season to the old tree.

At any rate, if not bothered by either the shot-gun or too free use of the woodsman's ax, a pair of owls will stay in the same neighborhood for many years, without any apparent thought of emigrating from their native woods.

WALTER TRUITT,

Chamute, Kans.

Hints on Skinning and Mounting Birds.

Of course I do not intend to enrich the minds of all the readers of this article with rare and new ideas, but I think many can read, and learn something by it that will help them a great deal in making up fine specimens, both of skins and mounted birds. Before I entered Wards Natural Science Establishment I had the impression I knew how to mount birds but I soon found I knew but comparatively little about the art. However I took careful observations and soon learned points which I wish others that are still following in my old path to know. If you have collected a bird and intend to make a skin of it, never let it enter your cabinet until every particle of blood stain is washed from it. This can be easily done with clean water.

If the bird is fat be sure and scrape it well to prevent the grease from entirely destroying your specimen.

In skinning a bird never cut the ends of the secondary quills loose from the Ulna; but, by cutting through underneath the wing, you can easily remove the flesh around the radius and ulna.

In all large birds it is an excellent plan to remove the tendons from the leg.

Always poison your specimens well and fill the bodies as near as possible to the natural size.

In nearly all cases I think it is a poor plan to sew the bodies up, as a great many of our collectors do for when you come to open them you are very liable to damage them by the thread tearing out.

Always fold the wings and let them dry as near as possible in their natural position.

Skins of Owls should never be laid on the back to dry, as the soft fluffy feathers on the head are sure to get out of place.

If the bird has a long neck always in-

sert a wire or stick the whole length to prevent its getting broken. If wire is used always choose zinc or copper, never iron, for it will rust and color your specimen if it comes in contact with the skin. If these points are observed and carried out I trust each one of us can escape the ever criticizing eye of our brother ornithologists.

In mounting a bird always use a solid body. This is easily made by winding excelsior with strong thread or string. Make each body as near as possible the same shape and size of the natural one.

If the feathers are badly covered with grease and dirt (as is generally the case with all water birds) wash them in naphtha thoroughly, and then dry in a box of plaster paris. With a small brush continually beat the skin, turning it over as you do so, as this will shake off the damp plaster and prevent it from setting to the feathers, which otherwise would be the case. Keep adding dry plaster until the feathers are all dry. Then with a small bellows you can blow nearly all the plaster from the bird.

Always use as large wire as you can conveniently.

Be sure and have the eyes of all your specimens directly opposite each other and looking at the same point.

If the body is not just the right size cut a slit through the skin under the wing and with a wire you can build out the body with cotton or tow to suit yourself. After the wings are folded in place nobody but yourself would ever know the cuts were there.

Do not mount all of your birds in one position as is generally the case. Have a variety and you will feel proud of them.

If you have a skin of a rare and handsome bird that has been torn and broken no matter how bad, never throw it away; but make your body and with glue you can stick each section in place. If the feathers are all there, and the job skillfully performed, I will defy any

man to pick out this specimen from your collection.

Never lay aside a mounted specimen simply because it has lost some feathers from different parts of the body, but take your tweezers and some brie-a-brac skin and glue (liquid glue preferred) set feathers in the vacant spots. Be careful and get feathers that match in color and markings.

I hope this will help at least a few, and in the near future hear from others who have any suggestions to offer.

NATHAN L. DAVIS,
Rochester, N. Y.

Great Horned Owl in Iowa.

As I was looking across the cold, bleak fields to-day (Jan. 28) toward the timber, my attention was attracted by the clatter of crows. They seemed to be finding fault with a large dark-colored bird which was sitting with apparent indifference in the top of a tall cottonwood tree. I listened intently and soon heard the low but distinct *hoo-hoo* of what I felt certain was a male Gt. Horned Owl. This not only reminds me that the nesting season of this bird is here, but that I had interesting experiences with *Bubo* last winter which I could relate to the OÖLOGIST readers, the powers that be permitting.

My collecting notes for 1892 show that I collected six sets of the Gt. Horned Owl in the vicinity of Norway, Benton Co., Iowa. It is the points of interest in connection with the collection of these sets, and also in connection with two other sets which I *might* have collected but *didn't*, that I wish to give.

The size, shape, color, measurements etc., of the eggs themselves are probably too well known to require mention here.

My long hunting trips were all fruitless until Feb. 13 which will be remembered as the warm clear day on which occurred our most brilliant display of aurora borealis. I had traveled eight

miles through patches of timber rapping with a stout stick on hollow trees or the trunks of others containing old nests. One large bass-wood contained an old nest about sixty-five feet from the ground which from appearances had not been used for years. After giving the trunk of the tree two or three raps with no result, I was about to pass on; but, as the snow was soft and wet, I concluded to lay siege to the nest for a minute in another way. Taking a position where the nest could be plainly seen, I was encouraged at seeing what looked like a small tuft of brown feathers projecting above the mass of sticks. Then taking a side step I could see another tuft near it, and the snow balls began to fly in earnest.

One of them struck a branch less than two feet above the nest and the pieces flew in all directions, but those ear tufts did not move. Exasperated at this I started up the tree, and when part way up the owl left the nest, the three fresh eggs formed a pretty center to the ring of snow which encircled them.

Set two, Feb. 20, consisting of two fresh eggs was found fifty feet from the ground in an old hawk's nest in a white oak tree. The owl in this case left the nest at the rap on the trunk; although the day was much colder than in the previous instance.

In the case of set three the owl was remarkable in just the opposite direction from the one with set one. I found the nest with a few loose feathers clinging to it by the middle of February, but could not see or hear an owl anywhere. I thought best not to disturb the nest for a while, so went again in about ten days, and, although I approached the nest cautiously, it was with the same result as before. On Feb. 29 I went to the nest again, but by a route from which I could get a view of the nest at a distance of two or three hundred yards. This time I was just quick enough to see the bird slip from the nest, drop

down beneath the branches and fly noiselessly away. The nest was in a white oak forty feet up, and rewarded me with a set of two eggs in which the incubation was far advanced. The nest was within two hundred and fifty yards of a house, which may account for the shyness of the birds.

Sets four and five of two slightly incubated eggs each were taken on March 1st. Both sets were deposited in old hawk's nests from which I got eggs of *Buteo borealis* in 1891, and were respectively sixty-five and thirty feet from the ground. Set four was in a bass wood tree. In this case the owl did not leave the nest when I pounded vigorously on the trunk, and only did so when I was about half-way up the tree. Some boys had reported seeing the owl on this nest two or three days before; otherwise the set would probably have been lost, for the tree was not of the kind that one is apt to climb out of mere curiosity. In the case of set five I could see the tail of the owl projecting over the edge of the nest, which was in a willow, and a small stick thrown in that direction was sufficient to flush her. Set six of two slightly incubated eggs was found on March 19, in the same nest and under the same circumstances as set two. The presumption seems to be that the same bird laid them.

This much for the sets I got, now as to those I know I *didn't* get.

On Feb. 6, I found myself looking intently at a dead oak tree which had a hole in it about forty feet from the ground. Rapping on the tree produced no results, and, as the hole looked very small anyway, I left it. A friend, whom I will call Brown, informed me a few weeks later that there were three young owls in that tree.

The second case was one of even greater chagrin to me. I had repeatedly passed under an old Crow's nest twenty feet up in a small red oak, and the idea had occurred to me that a

Coopers Hawk might appropriate it later in the season. It never presented the least appearance of being occupied until one day in April I saw a pair of young Owls almost as large as Pigeons sitting on it and looking wonderingly at me. The nest was small even for a Crow's, and was situated among rather thick second growth timber. It must have been that the old bird flew away out of sight every time anyone approached. As this nest was in the same timber as nest three, and only a short distance from it, I am inclined to think that the same wise old *Bubo* did finally succeed in outwitting me.

From my experiences with the Gt. Horned Owl in 1892, I have certainly learned never to take *No* for an answer from any old nest or hollow trees until all the pros and cons have been diligently investigated. As we are now at the beginning of the collecting season, I am in hopes that these notes will be of use to some who are expecting to study the interesting *Bubo virginianus* in 1893.

CHAS. R. KEYES,
Mt. Vernon, Iowa.

An Albatross at Long Beach, Cala.

On the 26th of July I discovered a specimen of the Short-tailed Albatross which was washed up on the beach near Long Beach, Cala. in San Pedro Bay.

I succeeded in skinning it and found it to measure 7 ft. 8 in. from tip to tip.

I was told by a young man, that three years ago, in the winter and during a storm a dozen of these birds were washed up on the beach in a length of about ten miles, but since then very few have occurred.

This may however have been some other bird as the person who told me is not "well up" in Ornithology.

Sometime about 1880 I assisted in capturing a young specimen of the Sooty Albatross on the coast several miles below here. We succeeded in partially domesticating him and dubbed him "Peter The Great." Sad to say he did not long survive his capture.

I would like to hear from anyone who is familiar with any of the species of Albatross.

M. L. WEEKS,
Los Angeles, Cal.

THE OÖLOGIST.

A Monthly Magazine Devoted to

OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, ALBION, N. Y.
Editor and Publisher.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Albion, Orleans Co., N. Y.

* Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS

A NEW SCHEME.—The Publisher of the Oölogist desires a lot of short, pithy, boiled down articles based on cold unvarnished facts of your own practice, experience or observation upon any subject of value or interest "to the student of birds, their nests and eggs." We want you to send us one of these articles during the month of March and we want you to write the same on the back of a *Postal Card* (any

size) and mail to us. Give the article a short suitable heading and at the end sign your name and address. Should you prefer to write on paper you can do so but the paper used must be a single sheet the *exact* size of a *Postal Card* and written on one side only.

To every subscriber of the Oölogist fulfilling our request by mailing us one of these "Postal Card Articles" during the month of March we will reciprocate by sending gratis, a copy of our new, 35 ct., "Standard Catalogue of North American Birds Eggs."

The following clipped from an article in the *Buffalo Courier*, of Jan. 31, may prove of interest to the readers of the Oölogist:

"Secretary George T. Smith of the World's Fair Commission of this, the Eighth Judicial District, concurred in saying that it is most difficult to secure space for exhibits. As far as New York State, is concerned, Mr. Smith says, the Fair is a success, and though the space for exhibits is far short of the demand, the room allotted thus far to this district insures a good showing. Mr. Smith gave to the *Courier* some of the more important exhibits that probably will go to the World's Fair from Western New York.

One of the largest local exhibits, and one that it would be hard to duplicate outside of the Smithsonian Institution, will be made by Frank H. Lattin of Albion. Mr. Lattin is a naturalist in everything that the word implies, and his collection of ornithological specimens are world-famed. He proposes to take to Chicago an extensive collection of birds eggs, sea shells, stuffed animals, and naturalists and taxidermists' supplies. Space has been given to him to the extent that he will be able to exhibit a pair of birds of every species known to North America and show their manner of nesting, whether on tree, bush, ground, cliff, beach, or marsh. This in some ways will be the most interesting as well as valuable exhibit coming from the Buffalo district."

We will hasten to plead "not guilty" to all that is said or implied in the above interview and at this date, (Feb. 24th,) —

we can make no *positive* statement either pro or con.

However, we would not be at all surprised if we were there with a modest little display and furthermore if such "should be" we are rather inclined to think our friends might find a modest little "Branch" of our establishment near the business part of the city. We expect to be able to say something both positive and definite regarding each, our exhibit and "Branch," in April OÖLOGIST.

ANOTHER SCHEME:—At the World's Fair we have been intending to make a good display of the eggs of North American Birds. A few weeks since while planning and mapping out, in our mind, the exhibit—this thought came to us "How nice it would be if every reader of the OÖLOGIST could be represented in the exhibit by a "gem" set of their own collecting or at least from their collection."

This thought has proven a "sticker" and is still with us, apparently more tenacious than ever, in our quandary as to how we shall rid ourselves of it. We open a book in which the names of the subscribers of the OÖLOGIST have just been recorded. We find that there is *over* two thousand of them, distributed almost everywhere from Alberta and Manitoba in the North, to the southern most part of Texas in the South, from New Brunswick and Nova Scotia in the north east, to Catilina Isle in the south-west. From Vancouver's Island in the north-west to one of the Isles of Florida in the south-east. As we close the book we think what a magnificent exhibit such a collection would make.

As we cannot dispel these thoughts from our mind we have concluded to let the readers of the OÖLOGIST share them.

What do you think about them? If favorably, let us hear from you *at once* by simply stating what "A No. 1,"

"XXX," "Star," "gem," (or whatever you may call them) sets you are willing to add to the exhibit. If you all take hold of the matter it will most surely be a "howling success." The more advanced collectors should avoid naming too common species—let the boys do that.

If we conclude to adopt this "scheme" with our exhibit, *hundreds* must take hold of the matter—for should there be any question whatever in our mind as to its not proving a BIG SUCCESS it will not be undertaken.

All we want *now* is your list and this we want *at once* for we must decide not later than March 20th as to whether this exhibit is to be made by "Lattin" individually or whether it is to be composed of sets furnished by the oöologists of America for that purpose.

Should we go ahead with the scheme we will be responsible for every set furnished and at the close of the Fair will return them prepaid or their value in cash. We will also mail as early as possible to collectors desiring to contribute to the exhibit, full particulars and instructions with blanks to be filled and printed labels which must be used on the packages, etc.

Each set when placed in the exhibit will be labeled with A. O. U. No., common and scientific name, date of collecting, name of collector, locality, and name of exhibitor. Let us hear from you *at once*. Any suggestions as to manner of displaying and arranging the collection, labels, etc., will be most gratefully received. We of course have our ideas but yours may be better or at least an improvement.

Address the Publisher of the OÖLOGIST, Albion, N. Y.

JANUARY CONTEST.

One Hundred and Thirty-four Judges.

Prize winners and credits received by each were as follows:

1. A Field Naturalist's Outfit. 557
2. The Golden Swamp Warbler. 480
3. Bird Nesting in an Illinois Swamp. 236

4. Notes from Isabella Co., Mich. 234
5. Two Warblers. 215

The following articles were each awarded one year's subscription to the *Oölogist*:

- | |
|--------------------------------------|
| The Osprey in Florida. 119 |
| A Collection of N. C. Birds Eggs. 84 |
| Birds as Pets 73 |

The Judicial Bench of 134 Judges was a "record breaker"—coming from thirty (30) States and Provinces, New York leading with 26, Kansas following with 9, then Minnesota, 8; Ohio, Iowa, Illinois, and Ontario 7 each; Penna, Calif, and Mich., 6; Mass. 5, Indiana, Wisconsin and New Jersey 4; Vermont, Maryland, Missouri and Oregon, 3; Maine, Texas, Virginia and Conn., 2; and one each from S. Car., N. H., Neb., D. C., Wash., La., Tenn., and Alberta.

From this large number of Judges only twenty-three (23) named the winning articles, and not a single one their exact order.

The Judges' prizes were awarded as follows:

1. No. 2.—Garrett Pier, Fifth Ave., New York City, who named the winners in the following order, 1, 2, 4, 3, 5.

2. No. 71—Willard N. Clute, Binghamton, N. Y., 1, 2, 3, 5, 4.

3. No. 79—A. W. Parshall, Oberlin, Kans., 1, 2, 3, 5, 4.

4. No. 49—Dana C. Gillett, Barre Centre, N. Y., 1, 2, 5, 4, 3.

5. No. 9—J. S. Square, Stratford, Ont., 1, 2, 5, 3, 4.

The following were each awarded a copy of the World's Fair Almanac. The lists of the first seven were exactly as near correct as the winner of the 5th prize—as this was a case of tie we awarded the prize to earliest list.

No. 11—Wait C. Johnson, Vt.

No. 50—H. and A. Lafler, N. Y.

No. 68—A. W. Baylis, Iowa.

- | |
|--|
| No. 69—Chas. A. Ely, N. J. |
| No. 80—H. L. Heaton, Kans. |
| No. 92—Walton Mitchell, Minn. |
| No. 126—Henry R. Buck, Conn. |
| C. S. Butters, Mass; A. M. Cassel, Va; |
| M. V. Stewart, Ills; I. H. Stratton, Ills; |
| E. F. Hadley, Oregon; W. Troutt, Kans; |
| J. S. Griffing, N. Y.; A. R. Ogden, N. Y.; L. Appleton, N. J.; N. F. Posson, N. Y.; G. W. Damon, Tenn. |

All prizes were mailed on Feb. 22d.

How Far South Has the Pine Grosbeak Migrated?

The flight of Pine Grosbeaks this winter has exceeded anything of the kind for the past twenty years in this vicinity, and as such an event is of *rare* occurrence and as the cold throughout the South has been so extreme results of great ornithological interest ought to be obtained. If all persons interested and who have *unmistakably identified* the Pine Grosbeak will put themselves to a little trouble a list will be prepared for some future number of the *Oölogist*.

The object aimed at is to find out how far South they have gone, and in what localities they have not been seen before.

Let us hear from all and have the work complete. Address all communications to

C. O. TROWBRIDGE,
Framingham, Mass.

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INFORMATION W

I desire, *at once*, POSITIVE information relating the *Nest and Eggs* of any of the following species and sub-species for my new "OÖLOGISTS HAND-BOOK." Due credit will be given in the work for all notes used. Write at once—*after April 1st will be TOO LATE.* Faithfully, **FRANK H. LATTIN**, Albion, N. Y.

- | | | | | | |
|-------|---------------------------|-------|----------------------------|---------|---------------------------------|
| 8 | Yellow-billed Loon | 390a | St. Lucas Woodpecker | 597b | Shufeldt's Junco |
| 19 | Whiskered Auklet | 398 | Arizona Woodpecker | 597c | Thurber's Junco |
| 24 | Kittlitz's Murrelet | 401a | Alaskan Three-toed do | 598-1 | Ridgway's Junco |
| 25 | Xantus Murrelet | 401b | Alpine Three-toed do | 571 | Baird's Junco |
| 45 | Kumlien's Gull | 407a | Narrow-fronted do | 571.1 | Townend's Junco |
| 46 | Nelson's Gull | 413a | Northwestern Flicker | 574b | Gray Sage Sparrow |
| 48 | Slaty-backed Gull | 414 | Gilded Flicker | 574b | Sooty Song Sparrow |
| [50] | Siberian Gull | 47a | Stephen's Whip-poor-will | 581g | Brown's Song Sparrow |
| 52 | Pallas's Gull | 125 | Whi-e-throated Swift | 581h | Santa Barbara Song do |
| 60.1 | Littl. Gull | 420 | Rivoli Hummingbird | 581i | San Clemense Song do |
| [68] | Trudeau's Tern | 427 | Blue-throated do | 583a | Forbush's Sparrow |
| 71 | Black-footed Albatross | 429a | Violet-throated do | 589 | Guadalupe Towhee |
| 83a | Lesser Fulmar | 431.1 | resi's Hummingbird | 594a | Arizona Parvuloxia |
| 87 | Slender-billed Fulmar | 437 | Lucifer's Hummingbird | 594b | St. Lucas Pyrrhuloxia |
| 91 | Pink-footed Shearwater | 438 | Reiffer's Hummingbird | 602.1 | Melodious Grassquit |
| 96 | Slender-billed Shearwater | 439 | Buff-bellied Hummingbird | 606 | Blue-headed Euphonia |
| [97] | Black-tailed Shearwater | 441 | Brond-billed Hummingbird | [607.1] | Gray's Tanager |
| [98] | Black-capped Petrel | 441.1 | Xantus's Becard | 609 | Hepatic Tanager |
| [99] | Sooted Petrel | 442 | Fork-tailed Flycatcher | 611a | Western Martin |
| 100 | Fisher's Petrel | 450 | Giraud's Flycatcher | [611.1] | Cuban Martin |
| 102 | Pintado Petrel | 451 | Sulphur-bellied Flycatcher | [612.] | Cuban Cliff Swallow |
| 123 | Least Petrel | 455e | Olivaceous Flycatcher | [615.1] | Pahaman Swallow |
| 107 | Black Petrel | 460 | Coues's Flycatcher | 625 | Yellow-green Vireo |
| 109 | Wilson's Petrel | 462c | Large-billed Wood Pewee | 629d | St. Lucas Solitary Vireo |
| [110] | White-bellied Petrel | 464.1 | St. Lucas Flycatcher | 631a | Key West Vireo |
| [111] | White-faced Petrel | 469.1 | Gray Flycatcher | 644a | Calaveras Warbler |
| 156 | Labrador Duck | 470 | Fulvous Flycatcher | 646b | Dusky Warbler |
| 169a | Greater Snow Goose | 470a | Buff-breasted Flycatcher | 651 | Olive Warbler |
| 169.1 | Blue Goose | 472 | Beardless Flycatcher | 652a | Sonora Yellow Warbler |
| 170 | Ross's Snow Goose | 472a | Ridgway's Flycatcher | 653 | Mangrove Warbler |
| 172b | White-cheeked Goose | 474b | Scored Horned Lark | 672 | Palm Warbler |
| 175 | Barnacle Goose | 474.1 | Dusky Horned Lark | 681b | Florida Yellow-throat |
| 177 | Black-bellied Tree-Duck | 474j | Sonoran Horned Lark | 682 | Belding's Yellow-throat |
| 178 | Fulvous Tree-Duck | 478c | Black-headed Jay | 682.1 | Mirador Yellow-throat |
| 191.1 | Cory's Least Bittern | 478a | Xantus's Jay | [689] | Red-bellied Redstart |
| 201a | Frazar's Green Heron | 481b | Belding's Jay | 690 | Red-ticed Warbler |
| 209 | Belding's Rull | 181.1 | Santa Cruz Jay | [691] | Red Warbler |
| 211.1 | Scott's Rail | 181b | Alaskan Jay | [692] | Brasher's Warbler |
| 211c | Caribean Clapper Rail | 484c | Loendorf Jay | [693] | Bell's Warbler |
| 216.1 | Farallone Rail | 488a | Sonoran Redwing | [694] | Swinhoe's Wagtail |
| 228 | Sharp-tailed Sandpiper | 498b | Bahaman Redwing | [699] | Red-throated Pipit |
| 242.1 | Long-toed Stint | 514 | Evening Grosbeak | [717] | White-throated Wren |
| [245] | Spoon-bill Sandpiper | 514t | Western Evening Grosbeak | 717b | Dotted Canon Wren |
| 256a | W. Solitary Sandpiper | 516 | Cassin's Bulfinch | 718a | Florida Wren |
| 259 | Wandering Tattler | 519b | St. Luas House Finch | 718b | Lonita Wren |
| [268] | Bristle-thighed Curlew | 521a | Mexican Crossbill | 720 | Guadalupe Wren |
| 272a | Pacific Golden Plover | 521 | Gray-crowned Leucosticte | 723 | Aiakso Wren |
| 288 | Surf Bird | 524a | Hepburn's Leucosticte | 725.1 | Marian's Marsh Wren |
| 285. | Frazar's Oystercatcher | 525 | Black Leucosticte | 726a | Mexican Creeper |
| 303 | Weich's Ptarmigan | 526 | Brown-capped Leucosticte | 727b | Florida White-breasted Nuthatch |
| 337d | Harlan's Hawk | 527 | Greenland Redpoll | 730a | White-naped Nuthatch |
| 337.1 | Harpy Eagle | 528b | Greater Redpoll | 733a | Gray Titmouse |
| 357a | Peale's Eider | 530b | Mexican Goldfinch | 733b | Ashy Titmouse |
| 360b | St. Lucia Sparrow Hawk | 532 | Black-headed Goldfinch | 737 | Mexican Chickadee |
| 363 | Guadalupe Caracara | 535 | McKay's Snowflake | 74c | Kowak Chickadee |
| 374a | Dwarf Screech Owl | 542 | Sandwich Sparrow | 742a | Palid Wren Tit |
| 375b | Arctic Horned Owl | 544 | Large-billed Sparrow | 743b | Grinda's Bush-Tit |
| 379.1 | Hoskin's F锯羽 Owl | 544a | St. Lucas Sparrow | 744.1 | Santa Rita Bush-Tit |
| 386 | Manzanares Cuckoo | 550a | Scott's Seaside Sparrow | 745 | Floyd's Bush-Tit |
| 386a | Maynard's Cuckoo | 550b | Texas Seaside Sparrow | 747 | Kennicott's Willow Warbler |
| [389] | Coppery-tailed Trogon | 551 | Dusky Seaside Sparrow | 747 | Tusky Kinglet |
| 322d | Caribean's Woodpecker | 554 | Worthen's Sparrow | 750 | St. Lucia Robin |
| 394b | Batchelor's Woodpecker | 556 | White-winged Junco | | |

2d Hand Books. I will give at all times good exchange for second-hand copies of any book I offer for sale. I desire at once good copies of "A. O. U. Check-List," and Baird, Brewer and Ridgway's "History of N. A. Birds"—both "Land" and "Water Birds." Will pay cash. FRANK H. LATTHE, Albion, N. Y.

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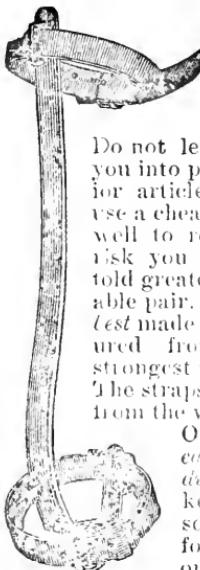
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Species.....	No.	Date	Month	Day.	Year.
Collector.....	Set Mark.....	Name.....			
<i>Locality</i>	<i>Collected by</i>				
<i>Date</i>					
<i>Remarks</i>					
<i>Sent to</i>					
<i>Date</i>					
<i>Consideration</i>					
<i>No.</i>					
<i>Nest,</i>					
<i>Set</i>					
<i>Locality</i>					
<i>Identity</i>					
<i>Incubation</i>					

\$300.00 WORTH OF PRIZES

Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
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Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's *OÖLOGIST*.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

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4th Prize—Baird's Review of American Birds" originally sold at \$2.00.	

5th Prize—Mrs. St John's "Audubon the Naturalist" \$1.00.

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded a duplicate of the 5th prize.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the *OÖLOGIST*.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than April 1st. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of *OÖLOGIST* and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talk about Business."

3d A collection of 20 common eggs.

4th A collection of 16 good minerals.

5th A 50 cent pkg. of Novelties.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 ets.).

All Judges' prizes are sent by mail prepaid.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.



VOL. X.

ALBION, N. Y., APRIL, 1893.

NO. 4

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales." Inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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DISCONTINUE my Ex. Adv. as I have more Birds than I know what to do with. The Oologist is the best Adv. paper a going. Long may it live. E. B. PECK, Canandaigua, N. Y.

TO EXCHANGE.—A set of 5 Hairy Woodpeckers, with data, for sets or singles of other localities, write soon. BAYARD RHODES, Toulon, Ills.

WANTED.—Sets of 144, 201, 301, 310, 315, 405, 417, 420 Will give Sets, Books, Papers, etc. C. BYRON VANDERCOOK, Odin, Ills.

STAMPS.—Send for best approval sheets at 33½ per cent com. Address, FRANK H. JACKSON, Box 11, Medina, N. Y.

WANTED.—A light, 12 bore collecting gun. Will give in exchange a few books on Natural History or will pay cash. FRANK D. WEEKS, Dustin Square, Flayerville, Mass.

FOR every 30c worth of first class singles not in my collection I will give 400 best quality dat.s. C. W. WELLS, Atlanta, Ga.

TO EXCHANGE.—Eggs in sets for old U. S. postage stamps, itgs, curiosities, reliefs, books and papers on Ornithology and Oology. Send lists with values and receive ours. G. & W. STARK, Buffalo, N. Y.

WANTED.—Eggs in sets with full data, can give 150 varieties stamps and Woods' Illustrated Natural History, chews. GARTH EVERSON, Lake Mills, Wis.

BOTANISTS ATTENTION. I wish to correspond with a few collectors in the South with regard to exchanging my specimens the coming season. O. B. COOPER, Coneyville, Evansville.

FOSSILS. L. and F. W. Shells, marine curios to exchange for same and stamps, papers (Philatelic and Natural History), and Vol. No. Oologist. D. H. EATON, 8 Cleveland Ave., Wooster, Mass.

FOR EXCHANGE. I have 20 copies of the Oologist and fine sets of Hawk's Eggs to exchange for Davie's Key (last edition). All letters answered. Address, H. O. TROUNCE, 14 Collier St., Toronto, Canada.

EXCHANGE.—Four Black Tern skins for Common, Arctic, Roseate and Least. First class with data given and wanted. E. S. MACGOWAN, 420 Holly Ave., St. Paul, Minn.

COLLECTORS.—I would like to exchange sets with collectors in different parts of America during the coming season. CLARENCE NORTON, New Carlisle, Ind.

BICYCLE.—I will buy or exchange an ordinary Victor for a safety or sell ordinary cheap or I will pay cash difference in exchange. W. E. BRADFIELD, Mayfield, Ky.

TO EXCHANGE.—Pet Raccoon, young, full grown; Bach numbers of the Youths' Companion as far as '84; Settings of pure-bred Brahma eggs. Letters answered. LEVERITT SMITH, Box 333, Wheaton, Ill.

WANTED.—A rifle or collecting gun in good condition. Will give for same fir class sets, domestic or foreign first class singles or books. J. W. HUFF, 159 Broadway, Indianapolis, Ind.

A NICELY MOUNTED Red Squirrel for a Davie's Key 3d ed. Also want deer antlers and littleigator skins. A. B. FARNHAM, Bennington, D. C.

A FLINT ARROW and fragment of pottery from the Indian Mounds in the Scioto Valley, ten cents. Reliefs and Curios, send list of wants. BARTON WALTERS, Box 236, Circleville, Ohio.

SO. CAL. Birds eggs in sets and singles to exchange for a shot gun or toy traps; state all particulars. OTTO J. ZAHN, 47 So. Hope St., Los Angeles, Cal.

SETS OF Tufted Puffin 14, Cassin's Aukslet 104, Faridone 12 & 3, cal. Brandt's Cormorant 32, 13, cal. Sooty 104 121 14, Burrowing Owl 15 18, Ann's Hummer 14, Yellow-billed Magpie 3, Little Flycatcher 5 5, Black-headed Grosbeak 3 3, and Russet-breasted Thrush 6 3. FRED A. SCHNEIDER, College Park, Md.

LOOK! LOOK! A collection of Stamps containing 341 varieties catalogued at over \$100, price only \$15. Many birds to exchange for eggs. GEO. D. FRENCH, Ledyton, Conn.

FOR EXCHANGE.—An eight-keyed ebony flute in fine condition (cost eight dollars). Wanted: Strictly first-class eastern bird skins in pairs. Make an offer. EDW. G. MERWIN, 1262 Franklin St., Oakland, Cal.

TO EXCHANGE.—Guitar worth \$6.50. 12 numbers of *Wide Awake* and 800 stamps in International album, for climbers or best offer of eggs. Write, CARL H. PLUMB, 1351 Washington Ave., Springfield, Mo.

FOR SALE.—First-class mounted birds and animals of Ohio. May need interchangeable shot gun and rifle. 12 gauge shot and 40 rifle, 22 target rifle; 32, 5 shot revolver; Bulwer's complete volumes elegantly bound; Poltser's Modern Cottage Homes, with details; Dantes Inerno: all in 1st class condition. Ask for price list. M. MC COON, Jefferson, Ashtabula Co., Ohio.

TO EXCHANGE.—An 1889 model, solid tire, Singer safety bicycle in good condition. Cost \$135. For first-class eggs, skins, ornithological works, taxidermy instruments or cash. Will take \$35. GEORGE B. HATCH, 121 Elm St., New Haven, Ct.

WANTED.—Postage stamps. South or Central American or any not in my collection. Will give stamps, old U. S. postal cards or a photograph of eclipse on sun last November for every 25 cts. worth. WALTER G. MANSUR, Pittsfield, Maine.

TO EXCHANGE—300 cigarette pictures, shark's teeth (very rare), piece of Indian pottery and miscellaneous relics, for first-class eggs, singles. Lists exchanged. C. M. CARY, 181 W. 135 St., New York City.

CECROPIA cocoons, cash price 2c. a piece. Exchange price 8cts. a piece, for climb-birds, eggs, printing press, back OOLGSTS, fishing pole, books on Oology or Taxidermy, fishing tackle, Oologist's tools, field glass, taxidermist's tools, microscope, good books, etc. Have also a few *tetra* and *orometha*. LEROY KING 304 Forest West, Detroit, Mich.

TO EXCHANGE.—A few specimens of the *Goniatites cornutus* and *Spirifer mucronatus* of fossils of the Carboniferous period. I will give one specimen of either Coke, Quartzite, Milky Quartz Quartz Crystals. Pet. Moss, or conglomerate (siliceous or calcareous), for every perfect arrow head sent me. LESLIE V. CASE, Naples, N. Y.

I HAVE a quantity of duplicate singles on hand to close them out this month I will sell very cheap, if you want anything in this line it will pay you to send for list. Tanning liquid \$1.00 per quart J. E. HOUSEMAN, Aylmer, Ont.

A WORKING MODEL of a high speed steam engine, 1 in. bore; a 12 gauge Dickerman hammerless, single-blotted shot gun; set of taxidermist tools; a 31 cal. Colt powder and ball revolver; an inductive coil; 2 electric bells; a set of boxing gloves and a box of fine water colors. All in good condition. For a double barreled breech loading shot gun in good condition. J. HARMAN'S FISHER, JR., 125 N. Calvert St., Baltimore, Md.

CIGARS.—Want you to try my celebrated cigars. Send stamp for price list of samples. Address, G. W. WALTON, Postmaster, Edmonson, Pa.

A31.

I HAVE disposed of a fine lot of eggs through the ex. notice in the OÖLOGIST. THEO MILLER, Lancaster, C. H., Va.

WANTED.—“Davie's Eggs,” for stamps and standard books and magazines. STEPHEN J. ADAMS, Cornish, Maine.

I WANT skins of Carolina Parakeet and Passenger Pigeon, also a fine pair of antelope (*A. americana*) horns attached to skull, and head of American Bison. Write, state lowest cash or exchange price. FRANK H. LATTIN, Albia, N. Y.

WANTED—Fossils and Minerals, only fine cabinet specimens desired. Have to exchange for the above a fine 22 cal. Marlin rifle, fine ebony piccolo German silver trimmed, old violin all fitted up ready to play on, Clark's London flute and a number of first-class eggs of the more common species in complete sets with full data, will possibly pay some cash for *very desirable* specimens. Full description of any of the above for 2c. stamp. P. P. NORRIS, L. Box 99, North Topeka, Kans.

I HAVE a few fine clutches of the following. I wish to clear out before I leave for a seasons collecting in Northwest Canada: Red-breasted Merganser 6cts. per egg. Ruddy Duck 25, Red-headed 18c., Eider Duck 18c., Mallard 10c., English Teal 12c., Harlequin Duck 50c., Booty 65c., Man-of-war Bird 75c., Ring-billed Gull 15c., Arctic Tern 1c., Gannet 20c., Fulmar 25c., Avocet 35c., Curlew 25c., Skylark 5c., Lapland Longspur 30c., McCown's Longspur 30c., Bartram's Sandpiper 30c., Spoonbill 30c., Red-throated Diver 25c., Golden Kinglet 18c. &c. Order at once as I leave May 1st for Northwest Canada, W. RAINIE, 181 Bleeker St. Toronto, Canada.

THE MARYLAND Academy of Sciences through the ornithological section is desirous of getting up an annotated list of the birds of the State of Maryland. To make this perfect correspondence is solicited from every bird observer in the state. F. C. KIRKWOOD, Chairman Ornithological Section, Md. Academy of Science, P. O. Box 364, Baltimore, Md.

LOOK.—I wish to obtain first-class sets of Hawks, Warblers, Scarlet, Gray's, Cooper's and Summer Tanagers, American and Northern Ravens, Fish Crow, Northern Phalarope and Cranes. I will pay cash for above or give good exchange in Indian reliques, polished and unpolished agates, gypsum, tiger eye, etc., spar jewelry, moccasins, small steam engine, scroll saw and lathe with or without water motor and desirable sets. I also have two cameras for sale, one size 6½ by 2½ with tripod and outfit, and a detective camera with fine lens plate holders and outfit, will sell cheap, write for prices. I will pay good cash prices for sets of Wandering and Yellow-nosed Albatrosses. Parties having any of above for sale or exchange please send list to H. W. ISAACS, Prospect House, Niagara Falls, N. Y.

EXCHANGE.—First-class eggs original sets and full data (A. O. U. No's). Bridled Tern 1-1, Noddy Tern 1-1, Sooty Tern 1-1, Arctic Tern 1-3, Black Tern 1-2 1-3, Common Tern 1-2, Gt. Blue Heron 1-3, Red-tailed Hawk 1-2 1-3, Red-shouldered Hawk 1-2 1-3 1-4, Am. Sparrow Hawk 1-4, Turkey Buzzard 1-2, Am. Long-eared Owl 1-4 1-5, Texas Screech Owl 1-2, Barred Owl 1-2, 1-3, limpkin 1-6, Sora Rail 1-8 1-6, Virginia Rail 1-6, Am. Coot 1-6 1-8, Florida Gallinule 6-1 7-1 8-1 1-0, Least Bittern 1-4 1-5 1-6, Leach's Petrel 1-1, Cactus Wren 1-4, Long-billed Marsh Wren 1-4 1-5 1-6, Bicolored Blackbird 1-4, Yellow-headed Blackbird 1-4, -5 1-1, Cliff Swallow 1-1 1-5 1-6, Meadow Lark 1-4 1-5, Bob White 1-8 1-10, Willow Ptarmigan 1-8, Murre 1-1, Mocking Bird 1-3, Pied-billed Grebe 1-6, CHAS. M. ELDREDGE 314 Chamber of Commerce, Chicago.

FOR SALE.—A fine collection of first-class eggs in sets with data. Both common and rare. Will sell for half price. Send for my list. CHAS. H. CULP, Gilroy, Santa Clara Co., California.

COCOONS and chrysalides alive and healthy for mounted *Lepidoptera* or I will give mounted specimens of foreign or domestic for good cocoons. Correspondence with collectors solicited. R. P. FROELICH, 1437 Lexington Ave., New York City.

FOR SALE CHEAP. A few first-class skins of Avocet, Wilson's Phalarope, Sanderling, Franklin's Gull, Longspur, Snow Buntings, Pine and Evening Grosbeaks, Redpole, Marbled Godwit, Woodpeckers, Rare Warblers, &c., send for list. W. RAINÉ, Bleeker St., Toronto, Can.

WILL COLLECT eggs of Cal. Murres in quantity this season. Can furnish A No. I well selected series at a very low cash price. Eggs shipped by express prepaid. WILFRED H. OSGOOD, San Jose, Cal.

COLLECTORS who wish any live striped or gray Gophers, Franklin's Rosy Gull skins, write card for particulars. Catlinite or Pipe-stem exchanged for any specimens 15c. per lb. Want Hummingbird skins, first-class shells corals, fossils, polished agates, eggs, skins, arrow and spear heads. A. D. BROWN, Pipestone, Minn.

TO EXCHANGE. Mandolin value \$1, set of 3 oz. boxing gloves, most new, value \$5. for taxidermist's tools and sets of eggshells in my collection. HARRY SMITH, 212 Capitol Ave., Lansing, Mich.

WANTED.—Complete files of periodical publications on oology and ornithology, especially amateur journals. EDGAR A. MEARNES, Fort Clark, Brackettsville, Tex.

HAVE YOU GOT THEM? I want many common water and western birds eggs in first-class sets with full data. Good opera and field glasses, linen bound trays and Indiana correspondents. I will give O and O papers, eggs in sets and cash in exchange. FOSTER MARIS, Bloomingdale, Indiana.

I HAVE a collection of eggs in sets and singles with data valued at \$10. Sell for \$15. cash accompanies order; 90 varieties. C. E. JAMES, Monterey, Calif.

WANTED.—A good collecting gun, detective camera and hunting knife, can offer rare birds eggs, skins, books and part cash. W. RAINÉ, Toronto, Ont.

TO EXCHANGE.—Good data at 15c. per 100 for any 1st class eggs, except most common. Sets with data prefered; at Standard prices. CHAS. A. WILLIAMS, Coralville, Johnson Co., Iowa.

EXCHANGE NOTICE.—Have one tennis net, two balls and one racket, together with directions. Will exchange for single barrel shot gun, 16 or 20 gauge with set of loading tools. Will sell for \$5. R. C. KLINE, 5 Standish St., Dorchester, Mass.

FOR EXCHANGE.—I will collect fine Cal. sets with nests if desired. Collected by myself and posit very identified. Thruber's Junco, Louisiana Tanager, Swainson's Hawk, Costas, Black-chinned, Anna's Hummers, Least Vireo, Cal Screech Owl and many others. Desirable sets wanted. RALPH ARNOLD, Pasadena, Cal.

Ast

NOVELTY PRINTING PRESS. Chase inside 7x10 in., hand inker and foot pressure, cost \$12 in good order, price \$8. Also one Model Press, hand inker and press, 5x7½ in., \$10, it is perfect. C. S. CURTIS, Kane, Pa.

WANTED. To exchange, eggs in sets, minerals, fossils, land and fresh water shells and bird skins for mounted birds and mammals. THOS. S. HILL, Knoxville, Iowa.

CURIOSITIES. "Birds Through an Opera Glass," 3 vols. Oologist and Fox Hound Pup, for Bird or Mammal skins. GEO. F. GUELF, Brockport, N. Y.

EXCHANGE.—289 stamps and album for best offer. C. F. WESTMAN, 155 King St., E. Toronto, Ont.

COINS WANTED.—If you have any rare coins of the United States or coins of any description of other countries, address BRICK PIERCE, Pipestone, Minn., stating prices, etc. Correspondence solicited.

TO EXCHANGE.—Richmond tennis racket, value 2.50 and small block plane (value 1.00), both are in good condition, for climbers with straps. All answered. BRACE & HUNTER, 923 Bayless Ave., St. Anthony Pk., Minnesota.

WANTED.—Smith & Wesson 32 Cal. Revolver, Double Action, Loading Tools and pair of Climbers. Have to exchange Tenor Horn, almost new, cost \$18. Back No's of Oologist, a few sets and several other articles, to exchange for sets. HAWLEY HALL, Lewisville, Ind.

TO EXCHANGE.—First class singles, No's (Ridgeway's) 115 (two), 128 (two), 135, 242, 278b, 382, 385, 402, 436; worth at Standard catalogue rates \$2.35, will take \$1.50 worth of sets (Osprey preferred) with full data. H. GORDON BALL, Niagara, Ont.

SPECIMENS of fossil coral (*acervaria*) geodes containing quartz crystals (light and dark) to exchange for Indian relics and minerals. HERBERT DUNN, Hoopston, Vermilion Co., Ills.

LOOK—I have a new pair of bicycle pants, a good lancewood rod and multiplying reel, a good collecting gun and a large lot of bird skins that I will exchange for old U. S. coins and foreign coins of any date. I would also like dealers to send me their catalogues of coins. W. R. BIRD, Mason City, Iowa.

I AM GLAD to see the Oologist improving. Would try to get more subscribers but almost every collector I know already takes it. From my last ad, in the exchange column I exchanged over 105 sets, besides a number of singles. With best wishes for the future I remain, EDWARD WALL, San Bernardino, Calif.

WANTED.—Fine skins of Warblers in any quantity. Have to exchange, eggs, minerals, shells or curios. WALTER F. WEBB, Geneva, N. Y.

WANTED. Copies of Pacific R. R. Survey Vol. IX. Coues' Key, Ridgway's Manual or any Government Report concerning birds etc. Write terms. E. F. MURTH, Box 298, Ellsworth, Me.

TO EXCHANGE. 125 different U. S. 50¢ for eigen stamps, and 175 cigarette pictures, histories, coins, etc., for best offer of eggs in singles. Prefer large ones. CURTIS WRIGHT Jr., Carthage Mo.

WANTED.—Skins of birds or mammals in any quantity, have to offer, fine specimens of eggs, or most anything desired. Send full lists. WALTER F. WEBB, Geneva, N. Y.

WANTED.—The one, two, three, four and five dollar used Columbian Stamps present issue. Will give Fractional Currency, Cuban Half Dollars or pay cash for same. Also other values except the first five. PERRY MARKS, Corn Exchange Bank, N. Y. City.

WANTED.—Taxidermist tools, in exchange for which I have back numbers of the *OÖLOGIST*, "Manton's Taxidermy" and a few eggs in sets. CADIN BURDICK, Lake City, Minn.

WANTED.—Books on American Fungi state condition, description and lowest cash and exchange price. Printing Press 6x4 with type, magazines hand scroll saw, and a few eggs for sale or exchange, all answered. D. T. KISSAM, 54 Sterling Place, Brooklyn, N. Y.

WANTED.—Magazines and books on Natural History. The correspondence of all interested in Natural History, send lists and receive mine. A. A. McDOLE, Howard, Kans.

FOR SALE.—One collection old coins, paper money, &c.; one collection postage stamps; one collection of arrow points, celts, hammers, drills, ornaments, a fine assortment; one collection of odds and ends, gathered from all over the world, mounted birds, rare woods, relics of famous places and disasters, war relics, Indian bows, buckskin coats, hats, horns, bones, shells, ores, &c. Will sell any one line or all that I have, will trade for stock of goods or real estate but prefer party to come and see them and will sell very reasonable for cash. For particulars write to B. B. PHILLIPS, Cuyahoga Falls, O.

FOR SALE.—26 First-class Bird Skins with data. For best cash offer or best offer of first-class eggs, by May 1st. For lists of skins address E. B. SCHRAGE, Pontiac, Mich.

EXCHANGE.—Wish to exchange foreign and domestic stamps for same with every collector in U. S. Also eggs for stamps. State size of collection. Every answer brings 25 Chinese napkins free. "Star," Decoto, Cal.

I HAVE some nice sets of Eagles, Hawks, Owls etc., for sale cheap with full date, send for list. G. F. DIPPIE 324 George St., Toronto Can.

TO EXCHANGE.—Fine Bird skins from Scandinavia to exchange for skins and eggs not in my collection. J. CLAIRE WOOD, 104 Abbott St., Detroit, Michigan.

FOR SALE.—A Hawkeye detective camera leather covered, with plate holder and roll holder complete, holding films for 100 pictures all in good condition cost new \$25.00 will sell for \$12.00; a 38 Winchester repeating rifle, 16 shots, cost new \$16.50 will sell for \$10.00. Is in perfect condition; will throw in 100 shells cost \$1.50. A. H. PHILLIPS, Lawrenceville, N. J.

DEAR SIR:—I enclose herewith "copy" for an exchange notice which I would like to have inserted in next issue of the *OÖLOGIST*. I enclose herewith in payment for same 70c. in stamps. I find that an exchange or want notice in your magazine always brings more replies than from any paper I've ever tried. Very truly, THAD. SURBER, White Sulphur Springs, W. Va.

Great Removal Sale!

Collectors here is your chance to get eggs at a low figure.

I have made arrangements whereby I shall move into larger and more commodious quarters, and in order to reduce my stock to the lowest possible notch, would request that all collectors send for my April list, which will contain nearly 600 species.

I have also added largely to my stock since March list was issued, and am already receiving nice invoices of 1893 collected eggs, such as Caracaras, Harris Hawks, White-tailed Hawks, Western Great Horned Owls, etc., etc.

I can present the largest assortment of single eggs of any dealer in the country. Send for list and you will be convinced. Address,

WALTER F. WEBB, Geneva, N. Y.

THE OÖLOGIST.

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NO. 4

The Raptore of Michigan. BY SCOLOPAX.

Perhaps some of the regular readers of the OÖLOGIST may recall that I began an annotated catalogue of the rapacious birds of Michigan. At that time March 1889, I wrote of six species of hawks, the list being discontinued the following month. It is now my intention to go on with this list of Michigan *Raptore* and complete my notes.

DUCK HAWK, *Falco peregrinus anatum*. This darling falcon was first recorded as a Michigan species, by Sager in his pioneer list of 1839. It has since been listed by Dr. Miles in the State Geological Survey, 1860; Cabot's Birds of Lake Superior, 1850; Boies's list of birds of Southern Michigan, 1875; and by all of the more recent lists. Steere in his list, 'Migration of Michigan Birds,' gives this bird as breeding in the state but does not substantiate it with any notes whatever.

The best supposition regarding this species, is probably to embrace it as an occasional straggler, but it may eventually prove to breed in some sections as it is a great wanderer.

THE MISSISSIPPI KITE, *Ictinia mississippiensis*, and **GYRFALCON**, *Falco rusticolus gryfalus*, are both embraced in lists of Michigan birds, but enough of evidence has not yet been adduced to convince me of their reliability as birds of our state.

PIGEON HAWK, *Falco columbarius*. This is the true Pigeon Hawk, although the Sparrow Hawk as well as the Sharp-shinned Hawk are often improperly called Pigeon Hawk. It is somewhat larger than the Sparrow Hawk, and though quite similar in flight and other movements, is readily identified at a considerable distance.

The Pigeon Hawk is embraced by nearly all lists but is considered rare by all but one authority, who says "common migrant." Professor J. B. Steere of Ann Arbor says the bird breeds in Michigan, but this assertion has as yet been unsubstantiated. Still the species may nest north of 45 degrees North latitude but as yet I prefer to call it a rare transient.

RICHARDSON'S MERLIN, *Falco richardsonis*. This bird was taken in the state by the Reverend Charles Fox, as reported in the appendix of Ridgeway's Birds of Illinois. I know nothing about the species and will embrace it as an accidental visitor.

AMERICAN SPARROW HAWK, *Falco sparverius*. Quite a common summer resident, arriving from the south in April and departing in October. It is a lively, interesting bird and generally quite well known to country people. It is never abundant, and cannot be compared to the Red tailed Hawks in point of numbers, but as it lives more in the open than the *Buteos* it is correspondingly oftener seen at close quarters. It is quite unsuspicious when reared in a locality where it is unmolested and often remains perched on the fence or dead limb at the side of the road as a team passes by. The Sparrow Hawk prefers a dead limb for a perch and will fly many rods out of its route in order to settle on a dead tree. It much more often sits on a rail fence, or stub, in a partially cleared country, and will preferably alight on the ground or a house or barn than in a fully foliaged tree. When it perches, it closes its wings so quickly that it is a cause of wonderment to the observer.

As this interesting little bird invariably lays its eggs in a cavity of a dead tree, so far as the observations of Mich-

igan collectors go, it follows that the species infest those quarters where it may find suitable sites for rearing young. It is therefore unusual for a Sparrow Hawk to be seen in a well-peopled district and where there are no dead trees, and I believe that the birds are also scarce in unbroken districts, where the woodman's axe has not left its work. At best this is my conclusion.

About May first, one will see a pair of birds hovering over and about an old stub, or the limb of a girdled tree. Inspection will show that the Woodpeckers have about riddled portions of the trunk and larger limbs. The Hawks are particularly attentive to a large opening, generally the former home of a pair of Flickers, or it often happens that a natural hollow is found, exposed through the breaking off of a limb. After years of exposure to the weather and long, long after the Woodpeckers have sought other and more solid trees, in which to drill their nests, the Sparrow Hawks move into the premises. It is usual for the pair to carry out more or less rubbish in the shape of rotten accumulations, and perhaps the litter and shucks of some miserly red squirrel's board may have partially filled the cavity.

Soon the devoted actions of the birds convince us that the eggs are being laid, a matter in which we are assured after witnessing the periodical absences of the female. Then we decide to collect that set, and with climbers in hand and in company with two or three egg-crane companions, a swoop is made on the base of that stub. But the swoop stops as soon as the most anxious one gets a few feet above the base, and as the top of the stub is seen to quiver like an aspen, the enthusiastic oölogist settles down and proclaims that it is not right for him to go up, and that the right way is to draw cuts. The second one thereupon makes a bold bluff, but as soon as the seeming lofty top begins

to weave about, he descends to *terra firma* with alacrity, and confidently asserts that he is sure "the eggs haint all laid yet." The result is that the Sparrow Hawk nests in peace, unless some envioas boy brings his blunderbus to bear on one of the old birds, as it perches near its eggs, or perhaps the wind brings down the old stub, thus exposing demolished home and broken egg shells. It is always dangerous to attempt to secure a set of these eggs, but it is not rarely done by zealous collectors, who lack wisdom in their anxiety to supplant a rival in the possession of the generally oddly marked eggs.

I have examined but very few nests thoroughly, though I have vainly speculated upon the interior many times. Very few persons have collected many sets of Sparrow Hawk's eggs, and several of my fellow collectors whose collections embrace scores of sets of several species of Hawks, have but a poor showing with this bird's eggs. Six sets of eggs is the greatest number in any collection in this county. The cavity selected by the Sparrow Hawk is from one to three feet deep, and the entrance is from a size of a Flicker's hole to seven or eight inches across. The eggs are laid as with the Woodpeckers on the bare bottom or perhaps a few chips or parcels of decayed wood.

Five eggs is the usual number, though six are not rarely found in a setting. The shades and grades of marking are so various that a page might be occupied in properly describing them.

I believe this to be a beneficial species of Falcon, as its food largely consists of the injurious meadow mice, *arvicola*, as well as grasshoppers in season. It is a beautiful little bird, and I do not know of another species of the family which can compare with it in coloration, or in elegance of form.

RED-TAILED HAWK OR BUZZARD, *Buteo borealis*. This is our largest summer visitor among the

Hawks, although the Rough-leg which is merely a transient is slightly larger, The Red-tail arrive in February and they are here in full force by the first of March. The birds appear to be mated before their arrival and are therefore ready to enter at once upon nesting duties. I feel well satisfied that the same birds consort year after year, and believe that this feature obtains in the case of all birds of prey. There is more or less soaring and screaming done by the birds soon after their arrival, but this seems simply a seasonal feature, and in a week or so it is over and the eyries are taken possession of by their old occupants. That the nests are occupied year after year seems almost incontrovertible. There are several evidences which point to this, the strongest of which is that feature of proof first suggested by Mr. B. F. Syke of Kalamazoo. He is a first-class collector of Hawks' eggs, and in his annual raid on the *Buteos'* nests, discovered that the females usually laid eggs which were colored and marked much the same from year to year. In several instances where eggs were found which were nearly without marks, strongly and again peculiarly marked, observations were taken and the following season the set in the identical nest would be found to possess the characteristic markings as of old. The same feature has been repeatedly observed by others in southern Michigan, and Mr. Willhelm has studied the eggs so carefully that in the case of one pair of Hawks, which he robbed, and which then left the nest, he identified the original pair of birds by the eggs in the second nest which he found a half-mile from the first, and nearly a month later.

In the case of those birds which have an old nesting site, the additional material required to repair it for the season is but slight, and requires but a very few days. The nests which are occu-

pied from year to year, are often very bulky affairs and may reach a diameter of twenty-eight inches or even more, while from top to bottom they are sometimes all of twenty-four inches. It takes quite ten days for a pair of Hawks to build a new nest and I have known a pair which had been robbed and driven away to occupy fully two weeks in finishing a new nest. Some birds build a large structure and again a nest will be found which is less than half the usual size.

The nests are nearly always placed in some large crotch, often the main one, in white or black oaks, more often the former, but are rarely found in hickory trees. Still I have known this buzzard to build in a shag-bark hickory. On lower land the favorite tree is the beech, but not rarely an ash, elm, maple or basswood is chosen. We found one nest in a giant sycamore, in which were several nests of the Great Blue Heron. The Hawk evidently made their selection a matter of convenience in order to feed on the young Herons. Gigantic timber oaks are sometimes selected, and these trees very often prove too massive for some oölogists to shin.

The nests are composed largely of sticks often quite an inch in diameter and over two feet long. Smaller sticks and twigs are placed above and the whole is more or less mixed in with pieces of bark and weed stalks. I have found tussocks of grass in the mass and once found an old mullein stalk in the structure. This pile is dislodged by the hand quite easily, but it presents an impervious barrier from the ground to the shot gun, and fifty charges fired into it would not materially phase it.

On the top of this oddly shaded nest is a shallow depression which is generally scantily lined with inner bark stripings, and occasionally with dry green moss. This faint hollow generally contains two eggs for a complete

set, but in about one case out of ten there are found three eggs, but never more. In one case in about every thirty, there is a single incubated egg, showing that to be the limit of the clutch, but it is fair to infer that this single egg is the result of a second attempt and after the first nest was robbed.

The eggs average considerable larger than the next species, and can generally be distinguished from them, both in size and by coloration, but both of these means of identity often fail, and I have repeatedly seen eggs of the Red-shouldered Hawk as large or slightly larger than small eggs of this Hawk.

Hundreds of sets of eggs of this species and the following, have been taken by egg collectors in this, and adjoining counties, within the last fifteen years. There are many eyries within three miles of the city of Kalamazoo of 20,000 inhabitants, which are still flourishing as egg producers, which have been known and robbed off and on for years. I feel safe in saying that there are five hundred *Buteos*' eggs now contained in collections in this county. Now adding the hundreds which have exchanged, sold and destroyed, and we may possibly realize the extent of the inroad made on the Hawks in this one neighborhood. Still adding to this the large number of young birds which are annually thrown from the nest, together with the list of adult birds which are shot by sportsmen and everyone else who can take aim and pull a trigger, and it seems a wonder that there are any Hawks left in this quarter.

Let me say a few more words while on the subject of Hawks. Last fall we had a side-hunt for game destroyers, with a regular schedule of cents per capita for our annual game supper. I was made judge, and in my capacity, inspected a horde of so-called *varmints*, embracing mammals, birds and reptiles. Hawks furnished the highest

score of all, and in the large number of scalps examined I identified seven species as follows: Red-shouldered; Red-tailed; Cooper's; Sparrow; Marsh; Sharp-shinned and Broad-winged. It hardly seems possible that this pestered family of birds could survive such persecutions, but there is, to me, no apparent difference in their numbers, and this spring it will be as easy as ever to find the nests and hear the *scr-e-e-e* of the Red-tail, the *ka-whee* of the Red-shouldered and the chatter of the Cooper's.

Just how early the Red-tail sometimes lays its eggs, it is as yet undecided, but I have known of nests robbed the first week in March which contained incubated eggs. About March twenty-fifth is the best time for collecting, but one cannot begin too early to locate the nests and watch the birds. I have seen nests robbed as late as May twentieth but these rare instances only occur when the early nesting has been interrupted. That this is the case, is well shown by the fact that late May nests nearly always contain a single egg.

The first set of Hawks' eggs that I secured were of this species and I shall never forget how proud I was of my prowess in the undertaking. That was long before climbing-irons were adopted in this neighborhood, and the undertaking was in no manner a simple matter. The day happened to be Sunday, though I did not usually collect on that day. In order to save my Sunday breeches, and a good scolding, I divested myself of my outer garments and shinned up that huge and lofty black oak in my underclothes. The act was a success in one way—that is I secured the eggs, but my scanty raiment was more scanty as a result of the rise and slide-down on that cruelly rough bark. Many a flake of skin was lost in the effort, whilst I shivered in the cold April wind. But never mind—I succeeded. "Twas long ago but I have the eggs yet.

A Collector's Gun

Under the heading, "A Field Naturalist's Outfit," the writer describes among necessary articles his gun and attachments, and as it has been more than 16 years since I was a beginner at the collecting of eggs, mammals and birds it may not be presumption on my part if I describe a part of my collecting outfit which to my mind seem superior to any heretofore described in your valuable paper. For this locality at least a rifle is of little use in securing game to say nothing of the damage done to specimens by the whirling motion of the bullets.

Hunters prefer shotguns to rifles because game is seldom seen at long range. Bears are usually trapped and killed with a charge of shot in the head at close quarters; if pursued bruin will rush away through briars and swamps where dogs can scarcely follow the thorns seeming only to comb his coat of jet. Large shot is sure enough for deer so what use of a rifle barrel here?

I see no use of anything more than a good killing breech loading shot gun and an insertion barrel. The latter can be made by any practical gunsmith. One which I have used for 8 years with the utmost satisfaction is of the following description.

Length 8 inches, bored to receive 32 calibre winchester cartridges, is not chambered but tapers gradually from breech to muzzle, the latter being the same diameter as the wads which snugly fit the shells. A band $\frac{1}{2}$ inch long is shrunk around the muzzle to make it fit the gun barrel and another band $1\frac{1}{2}$ inches long is shrunk on the breech end and a rim is made on it when it was finished in the lathe so that it fits the gun just the same as a paper shot shell. Room is made for the head or rim of the cartridge to sink in even with the breech end of the barrel, and a square notch is made on one side deep enough

to allow the use of a small chisel-like instrument to extract the shells. The shells I use are the common 32 calibre winchester ammunition. I pulled out the bullets with pinchers, and a few shots expands the bottle-necked portion of the shell so that it is all the same size. I punch out the exploded caps with a piece of pointed steel wire and a light hammer, and to seat the new primer I stand the muzzle end of the shell upon any smooth metal surface and give the cap a few light blows with the same hammer. These shells are very durable and will stand thousands of shots before they wear out. What I use were bought in 1885 and all have been fired many hundreds of times and except for blackness seem none the worse of wear. My wad cutter is a hollow belt punch of the proper size. For ammunition measure I use a 32 calibre short Smith and Wesson centre fire shell, I drilled a hole through the exploded cap and fixed in a wire for a handle and when heaped full of powder and level full of shot is a proper load, and there is 800 charges of powder and 125 of shot in a pound of either.

High priced coarse grained powders are of no use in these shells, the fine grained cheap grades, or the quickest wood powder are all right. One wad on powder and one on shot is all use. With fine quick powder and No. 10 shot I have killed such birds as Tanagers, Grosbeaks, Jays, etc. at the height of over 75 feet and have secured many warblers at the same height with dust shot. The pattern and penetration of this little barrel is wonderful, for destroying such vermin as the English Sparrow, Chipmunks, Squirrels, etc. it has no equal, for it is nearly sure death to them and does not make much noise and uses the least ammunition of any effective gun using powder and shot.

For the collector of birds nothing can surpass it, in either utility or economy. With one of these insertion barrels a

THE OÖLOGIST.

man can hunt prepared for any size of game, because it can be carried in a pocket or other convenient place and a cartridge withdrawn from the gun and the barrel inserted at any moment necessary, or if small birds are principally desired, it may remain in the gun and the other gunbarrel may be kept loaded for something larger. Hoping that what I have written may be found of advantage to those who delight in studying and gathering specimens. I close with a few suggestions to H. H. D., Phoenix, Ariz. who wants information upon collecting eggs from nests in the giant cacti. I believe the troublesome thorns might be scorched to a harmless shortness by a fire of resin or some substance that makes great heat when burning. It could be placed in a dish and attached to the end of a pole. In this way the people in Southern Texas singe off thorns from prickly pear when they feed it to cattle except that the pear is cut in pieces and on the end of a pointed stick is held over a fire of brush. If H. H. D. cannot climb the cacti, let him send for me, I have felt the points of many a Spanish bayonet and cacti thorn.

JOHN A. MORDEN,
Sherman City, Mich.

The Rough-winged Swallow.

The Rough-winged Swallow is imputed as rare in all places of its occurrence. However, it may be possible that it is of more general occurrence in almost all parts than is thought, it being too frequently overlooked or confounded with its very near relative, the Bank Swallow.

In my own county of Orleans I find it to be a summer resident that may be depended upon, and several sets of its eggs are taken each season; although Mr. J. L. Davison does not mention it in his "List of Birds of Niagara County," adjoining, and in the "List of Birds

of Buffalo and Vicinity" compiled by Dr. W. H. Bergtold of Buffalo, in 1889, we find the following mention of it: "One taken at Glenwood, N. Y., 1888, by Miss T. M. Schlegel."

But, to use a common expression, if we "look a little out," I think we may find *Stelgidopteryx serripennis* to be a trifle more common than we had anticipated.

This bird is so like the Bank Swallow in every particular that the only safe means of identification is the bird in the hand. However, it may be identified when flying towards one by an observation of its throat and breast. The throat of the Bank Swallow is white and it has a black pectoral band, while the Rough-winged species has a black or brownish throat and no such band on the breast. The bird in the hand will reveal the peculiarities from which it takes its name.

Although the sand bank, the home of the Bank Swallow, is generally ascribed as the nesting-place of the Rough-winged; in my locality at least, such is not the case as often as otherwise. With me the favorite nesting place of *serripennis* seems to be in the crevices of the stone work which forms the side of the Erie canal or abutments to its bridges, or in crevices of stone work in the vicinity of any water, and I think that if those who are seeking for this bird will look carefully about such places in their locality they will find it not uncommon there.

The nest is loosely composed of straw (almost entirely), with sometimes the addition of some feathers. The eggs are pure white, and I find that they differ from those of the Bank Swallow in at least two particulars. First, they are not so much pointed and may be a trifle larger; and second, the number of them is generally greater, the complete set generally consisting of seven or eight eggs, which are deposited the last week in May.

Stelgidopteryx serripennis does not seem inclined to shun civilization in the least. The Main street of our village (Medina) crosses the canal on a bridge, over which there is almost continuous passage; and it is in the immediate vicinity of this bridge that I find the best place for observation of *serripennis*, for about this bridge two or three pairs spend each summer nesting in the crevices of the stone-work which forms its abutments as well as in the stonework of the tow-path.

The nest is generally well back in, and the eggs can only be secured with the aid of a long-handled scoop or, perhaps by loosening some of the stones and removing them; and, in either case, at a great risk of breakage to the eggs.

The Rough-winged Swallow does not arrive from the South until the first week in May and departs unnoticed in the fall.

NEIL FRANKLIN POSSON,
Medina, N. Y.

A Criticism.

For a long time I have thought of writing up a word of criticism for the readers of the OÖLOGIST, and giving some ideas which may cause thoughtful discussion among your writers. My only reason for denying myself the satisfaction of spreading my criticisms broadcast, was the one that I might cause someone a heartache, and perhaps involve myself in a disagreeable discussion, and also get myself disliked. However, after mature deliberation, I have decided to speak right out in meeting, provided the editor will permit it. And like a capable surgeon I will cut deep, even if the patients do service, because there is strong evidence that there is more than a simple disorder here, and the sooner skilled attention is given the matter the better.

The OÖLOGIST is a medium of communication between us, and as such

is to be upheld by all, and we must not allow its standard to be lowered by anyone either through ignorance or evil intent. There are many boys who send scraps of information to the OÖLOGIST who exaggerate without intention; stretching the truth so that it will appear very bright. These bits of big-talk are readily detected by anyone who has collected for any length of time, but are believed fully by honest-souled amateurs.

Then again there are writers who observe honestly and mean well, but who from ignorance report matters wrong. It is my intention to speak of various cases which require correction and in this connection cannot do better than to call the readers' notice to Mr. A. C. M.'s article on page 54 of the Feb. issue, where he refers to the Goshawk in Illinois. Mr. M. says: "I wish young collectors could have the need of careful identification more thoroughly impressed upon them. I know several collectors(?) who have no guide but Davie's Key, and will hunt in that until they find an egg nearly like the one they have, and then have a great find." There lies the whole matter and every reader of these lines will agree with me that identification is the main factor of an egg collector's reliability. Mr. M. is honestly incensed at the assertion that the Goshawk breeds abundantly (or at all) in Illinois. It is a northern bird.

By looking over the back numbers of the OÖLOGIST I could bring to light many ridiculous errors, but I do not doubt, in fact I know that the class of readers and writers has changed greatly for the better, within these last few years. However as there are many unintentional errors, in your recent issues I will refer to them.

In Feb. issue a writer says that the song of the Wood Thrush is usually uttered from the top of some forest tree. Now I believe the readers will

bear me out in maintaining that the Wood Thrush *never sings from the top of a tree*. Am I not right?

Again we find that a collector took a set of *Barn Owl's eggs from an old apple tree*. This is remarkable that a rare bird east of the Mississippi river should nest in Indiana. In same article he says he took another set of *barn or hoot owl*. Anything that lives near a barn and hoots is a *barn hoot owl*. Now my dear sir you never saw a nest of Barn Owl in Indiana. You are honest but terribly mistaken. This correction may seem hard but it is necessary or the boys of Indiana will all have *Barn Owl's* eggs in a month or so.

In another excellent article, the writer says he found two deserted nests of Albino Marsh Wren but fails to say whether the birds, eggs, or nest were white. In fact were any of them white? Such items are idle, unless carefully substantiated with accurate data.

Another writer says he found a nest of the Swamp Sparrow which he identified. How did he identify the eggs? Now Mr. Editor, I have outlasted several generations of oölogists, and have never taken a set of Swamp Sparrows. At least 500 nests of the Song Sparrow have met my view but never yet a set of Swamp. Every sparrow's nest built in a marsh or swamp does not constitute a Swamp Sparrows nest. Let us get this identification.

A Minnesota man says he has never heard the song of the swamp sparrow, although they are common there. The song is heard everywhere in May, June and July where the birds are found, I can assure him.

Boys, study the songs of the birds, walk with caution, eyes and ears open, and you will find as much pleasure in the study of details in a bird's notes, movements, etc., as if you secured a large collection of eggs and knew nothing of the birds and habits. Remember you are but very little if any above the old-

fashioned collector who strung his eggs in festoons, if you simply collect for pleasure of amassing eggs and leading other collectors. The collector who simply tries to gratify a fad for collecting eggs, is unworthy of the name of oölogist, and in time surely a very few years, at the most, he drops out of the deal, and his once precious eggs are eaten by the mice, smashed, sold, given away and cast to the four winds.

I am an egg crank, dyed in the wool and come to stay, and I take as much interest in birds nests now as ever did. Taking three years as the average collector's fad, and this is reasonable, I have lived and collected through ten generations or ages of egg-cranks, and yet my love holds fast to the subject, and I feel a deepening interest in the subject because I have studied my friends the birds and their nests and eggs. To be sure I do not feel that thrill of joy, indescribable, which once enthralled me, when my hand stole into a nest and felt the treasures there but there is a higher and better feeling, which is an outcome of love of the study, intensified by years of devotion to the subject or service if you will.

I am not trying to discourage you boys. On the contrary, I want to inspire you with a rock bottom enthusiasm, a lasting love for the study and all associated with it. I sincerely hope that those old writers to the OÖLOGIST will read my lines and thereby secure a new lease of life—that is a revivification. I feel that intense longing each and every spring for the woods and fields, and birds that I had when a boy, and I am trusting to always retain it.

"The child is father of the man,

And I could wish my days might be
Bound each to each by natural piety."

But to return to the subject of criticism, and I presume that you are all inclined to berate my authority to talk as I have done.

A list in Feb. No. gives eighteen nests of species described as composed of "etc." To be sure if only one or two species of birds built their nests of "etc." we might comprehend it, but when the Prairie Warblers nest is composed of grass, reed leaves, spider webs and "etc." while the Brown headed Nuthatch has a nest of bark, wool, rotten wood "etc." we are certainly in need of information. This way of describing nest structures is common and censurable. Describe a nest's materials and there stop.

In the January No. appeared an article which, as the boys say, yanks the fruit-cake from the baker's emporium. This article means well, I doubt not, but it is so incongruous that it is enough to make a man laugh. Undoubtedly it reads well to boys, but to mature collectors it appears ridiculous in the extreme. To a boy of big ideas it may seem essential to carry a combined gun, with interchangeable barrels; 25 rifle cartridges, 35 shot gun cartridges, skinning outfit, 1 lb. of arsenical soap, 3 blankets with the rubber axe, cooking utensils, dishes etc., and a big knife in case you met an old "she bear."

Great Livius, I'd like to see the poor boy start out on a trip. And think of it, 2 lbs. of bacon and only four spoonfuls of coffee. If I had to lug it all, I would mix the $\frac{1}{4}$ pound of butter with a pound of arsenic and take on starting. No one so handicapped, can travel and observe with pleasure and profit. No wonder the writer did not say a word about a pencil and notebook. He had no room.

Boys the way to observe and collect is to *go light*. Remember and sleep in the house if you can. The seven-inch knife is all nonsense, and the axe hardly ever necessary. It is far better to carry your birds home to skin, for *field skins are never good; never! never!* However if you are out for three or four days it is well to have a *half*

ounce of arsenic powder, to apply if you shoot a rare specimen the first day and can hardly save otherwise. Leave your pound of arsenical soap, the soothing pipe and the long-bladed knife and much other useless druff at home. Take instead, a good note book two pencils, a clear head, two slices of bacon, shot gun and ten rounds, if needed, one blanket, a pair of good eyes and ears. Let the old "she bear" have a rest, you have no use for her. Apply yourself to your observations, and when you lie down to sleep at night feel sure that you have accomplished something in the way of discovery, even if you have not robbed some bird's nest. Boys make it a point when you are out to exert your own powers and not feel that you are relying on some other man's knowledge. Search out something new, learn of some peculiar habits unknown to others. The woods and fields are full of opportunities for discovery, as the woods and fields are also full of collectors who go aimlessly wandering about learning nothing worth remembering and finally give up the foolishness, as they often call it. Your egg-collecting is just the very starting point and in time you will be a thoughtful man and a naturalist. You will look back and think that the little monthly OÖLOGIST was the promoter of your deep interest and intense pleasure in all that is connected with nature.

Another point: study the articles written from month to month. Write articles, and good ones too, write compositions at school as required—spend time and much pains on them and after reading at school send to the OÖLOGIST. Don't be hurt or angry if they are not published. Try again! The effort did not hurt you, but strengthened you. The boy who is bound to succeed will do so either at school or in the woods.

I would call attention to the article on

Osteology in February No. It is a subject which will furnish much interest to the observer, "Notes from Isabella Co," and 'Birds as Pets,' in January No. show thought and observation and something outside of the common run.

Trusting that I may be forgiven for my expressions I will subside.

G. SIRROM.

Nesting of the Blue-winged Yellow Warbler.

Helminthophila pinus.

Although this bird seems to be common in this vicinity, I see very little in OÖLOGIST as regards him. He might be called rare by those not acquainted with his song. After learning the song and thus having my attention further called to him, I was surprised to find how many were in the woods which otherwise I should never have noticed.

The nest however is hard to find. On May 30, 1892, I found a nest which was betrayed by the birds, after they had been watched for sometime, the female bird had disappeared and I had given up finding the nest. I gave a sharp whistle as a signal to my companion, who had become lost to my view, that it was time to move on. At once a bird flew up from the tall grass a few feet distant to a neighboring tree, I recognized my Blue-winged Warbler. In a few minutes I had found the nest which was about completed, but contained no eggs.

June 7th I paid it another visit. The nest had been crushed by a Cowbird (*Molothrus ater*) who had left behind her complement of one egg. The birds were not to be seen, the nest appeared to be deserted. However I removed the Cowbird's egg.

June 9th happening to pass the nest I looked in and was surprised to find two eggs of the warbler. Birds not seen.

June 12th I paid it another visit and

found 3 eggs which was all the bird laid in the nest unless one or two were thrown out by the Cowbird. The experience of others in this locality give the common number laid as five.

The nest was composed wholly of leaves on the outside. The inner parts were composed of strips of bark and grass, the material growing finer as it neared the interior. It was narrow and deep, not inverted cone shape. It was placed in a plot of high grass between some stalks of Golden Rod and barely touched the ground. There were no leaves on the ground near the nest. It was supported by the grass and Golden Rod on which it depended for concealment.

The plot of grass abounded with various vines and briars. It was next to a pine grove on one of the banks of the Housatonic river.

W. L. DUNBAR.
Bridgeport, Conn.

SCENES FROM THE LIFE OF ALEXANDER WILSON.

Wilson in Scotland.

G. VROOMAN SMITH.

I wha stand here, in this brae scowry coat,
Was once a packman, worth mony a groat;
I've carried packs as big's your mekele table;
I've scarted pats, and sleepit in a stable:
Sax pounds I wadna for my pack ance taen,
And I could baudly brag 'twas a mine ain.
(A PEDLAR'S STORY.)

On the 6th day of July, 1766, in the town of Paisley, Scotland, was born the author of the above Scottish rhyme and one who was destined to attain a pure and enduring fame in the country of his adoption.

His parents though not of royal birth, were by no means ordinary personages. His mother died when Alexander had scarcely reached the age of ten. The death of his mother and the unhappiness caused by his father's second mar-

riage, early induced the youth to leave the paternal roof. At the age of thirteen he bound himself to his brother-in-law, William Duncan, who resided at Queen's Ferry, on the Frith of Forth, as an apprentice in the weaver's trade. Up to this period young Wilson had received only the rudiments of a common education at a grammar school in his native place. At an early period of his life he evinced a strong desire for learning; so much that his father proposed to educate him for the ministry; but his worthy intentions failed to materialize. The occupation to which he had bound himself was not in the least adapted to his free independent nature. Long hours of gloom and despondency, softened only by poetical musing, marked the three years of his apprenticeship. His leisure hours were employed in the perusal of magazines and trying his skill in the composition of verses. Becoming weary of the sedentary employment of weaver he procured a pack and travelled through Scotland as a peddler. On these journeys he carried with him a prospectus of a volume of poems which he intended to publish. We can scarcely imagine a more peculiar combination than that of peddler and poet. He speaks of his occupation in such language as this:

If the pedler shou'd fail to be favored with sale,
Then I hope you'll encourage the poet.

Burns was now at the zenith of his glory. His verses were eagerly read by all the English speaking race. The sweet cadence of his lines became the admiration of every Scotchman. Wilson was alike moved. Burns had ever been his ideal. To attain success equal to Burns was the high goal of his ambition. Little did he realize that time and circumstances would favor his rise; and that he would lead a life more excellent and honored, and hand down to posterity a name of equal renown.

Soon after Burns had published his poems, Wilson addressed a letter to

him, objecting to the moral tendency of some of the pieces. Burns perceiving the writer of the letter to be a man of no ordinary ability invited Wilson to visit him at his home in Ayrshire. This interview was extremely pleasant to Wilson, and he repeatedly referred to it in after life in terms of great delight. Not long subsequent to his conversation with Burns he wrote an anonymous poem called "Natty and Megg," which brought high praise from all who read it, and which was acknowledged to have proceeded from the pen of Burns.

The cause of his emigrating to America was the outcome of a dispute between the manufacturers and weavers of Paisley. Wilson sided with the weavers and wrote a personal satire against an individual in the opponent faction. It was published anonymously, but public opinion ascribed it to Wilson;

On returning from the printers one evening he was seized by spies who found upon his person certain papers which testified to the author of the severe satire. He was tried and sentenced to a short imprisonment and compelled to burn the libel at the public cross of Paisley with his own hand. Not long after he decided to emigrate to America and there engage in the merchantile business. He applied himself assiduously to weaving and thus procured the necessary funds to defray the expenses of the passage. He set sail from Belfast for the land of his future fame in the summer of 1794. The vessel had its full number of passengers, but rather than give up the opportunity he consented to sleep on the deck throughout the passage. He landed at New Castle, Delaware on the 14th of July, 1794.

Such are, in brief the important events of the first twenty-eight years of the great ornithologist's life. Years of depressing circumstances indeed; yet he rose in the face of great opposition

to the high pinnacle of fame. He spread a lustre over his chosen occupation which has been brightened by the long line of venerable followers. Wilson may justly be regarded as the pioneer of American ornithology; and the place which his chosen science now holds in the public favor, must be considered as principally owing to his exertions. He paved the way for the science which has numbered in its ranks some of the greatest educators of the nation; some of the giants of the land. Audubon was scarcely more than a boy when the first volume of his American Ornithology was published, and he was travelling the country from north to south soliciting subscribers for his efforts.

It may seem a little strange to us that Wilson failed to succeed in his poetical efforts. The great difficulty in his poetry is the lack of that grace and freedom of experience which characterizes the verses of his superiors in the art. He was a man of strong feeling and had a great abhorrence of anything base or mean; but was deficient in language. But these early poetical inspirations were not without their effect upon his writings in later days. As we read his description of birds we can not fail to discern touches and passages of great poetical beauty.

He published in 1789 a small volume of his poems called "Poems, Humorous, Satirical, and Serious by Alexander Wilson." Two editions were published; but he realized no profit from the sale. Many years after, when he became engaged in the science which has made his name honored among men; he wrote on the fly-leaf of a copy of his poems, "I published these poems when only twenty-two, an age more abundant in sail than ballast. Reader, let this soften the rigor of criticism a little. Dated Gray's Ferry, July 6, 1804."

At another time he said, "There were the sins of my youth; and, if I had taken my good old father's advice, they would never have seen the light."

Queer Myths About Birds.

From the earliest period of time from which we have any knowledge about the myths and omens of the various races, the bird has always been the occasion of many superstitions, the following of which are only a few.

One of the oddities of the Egyptian religion was the homage paid to birds, the penalty for killing a Hawk or an Ibis, was immediate death. The feather of an ostrich was to the Egyptian an emblem of justice, the same of the eagle is among some North American tribes the sign of truth and among others of bravery, and in Cairo, Egypt the Hoodoo, which is common there, is held in reverence as the bird of Solomon, and some Egyptian gods are pictured with the heads of birds. In China the Crow was formerly thought an evil omen. The Romans too, held many queer ideas and fancies about the different species of birds, in the feeding of birds, if the bird dropped from its bill the grain that was thrown to it, they considered it a sign that the gods were pleased with the subject in question, and had taken this means of showing their approval, and the flight of birds was thought a demonstration of the will of Jupiter and while the Hawk and Eagle both meant victory the Eagle was considered the stronger omen of the two, but an Owl was very unlucky, and a bird seen upon the left side of a person was an evil omen, while one on the right side was thought good.

In Australia the natives believe that the cry of a Hawk in the night means the death of a child, and that the bird is taking off with it the child's soul. The Syrians in ancient times ate all birds except pigeons, which they looked upon as holy.

One of the birds in The Talmud, when it spreads its wings, it covers the sun, and what is still more queer is the idea that the egg of one of these birds fell out of the nest and the white of it

broke and overflowed a village, and not only that, but stuck together three hundred cedar trees. The famed Hintzilopoehlti, a Mexican deity, was thought to be changed into a Hummingbird.

The Zulus attribute thunder to the "thunder bird," while there have been many minor superstitions, some of which were so common that they were not recorded by the ancient writers, the above will give the reader some idea of them.

D. T. KISSAM,
Brooklyn, N. Y.

Band-tailed Pigeon.

Columbidæ fasciata.

The range of this species of the family *Columbidæ* is the entire Pacific coast region of North America. Their time of arrival in this locality is in May, when they put in an appearance in flocks numbering from a dozen up to hundreds, but in the past few years it has been rare to see large numbers together.

They seem to be diminishing in numbers, as less and less, seem to frequent their usual haunts each year, and perhaps the day is not far distant, when they will have disappeared, as did the Pigeons, (*Ectopistes migratorius*) which were so abundant in New York and Pennsylvania, only fifteen years ago. Now one hardly sees a pair, where then they could be found by the thousands. Where have they gone?

True many were killed, but not all. Have they found new fields, not yet found by our naturalists, where they breed in peace?

And so it is with the Band-tailed Pigeon of this coast. Five years ago, the farmers tell me, that this species was so abundant in this vicinity, as to be destructive to the grain.

That at early morning and evening the air seemed fairly black with them

as they flew back and forth from their feeding ground to their roosts.

Now they have dwindled down so that where thousands visited this locality then, only a few flocks of fifty or one hundred each are seen now.

What is the cause for this? They have not been slaughtered here, like those of the Eastern States were.

They seem to be receding back in the mountainous districts, and higher altitudes, and perhaps this is why we see less of them.

In my observations I find that they prefer the higher altitudes. The foot hills of the Cascade range and up to an elevation of 2000 to 3000 feet seem to be their favored localities.

Generally preferring to follow up some river or creek.

The localities especially frequented are the Mineral Springs, which exist in this range.

The waters of these springs contain soda, iron, sulphur, salt and a few lesser elements, and are generally known as Soda Springs. Several such springs exist within the town limits of this place (Sodaville) from which it receives its name.

Some element in these waters attract the Pigeons in large numbers, and they can be seen at all times of the day, flying to and from these springs and visiting adjoining springs.

The time they remain at the spring is generally short, ten or fifteen minutes, but they visit them many times during the day.

What properties it is in these waters which they fancy I have not been able to determine definitely, but as their principal element is generally soda, I judge it is this which they are after. However they visit these springs in large numbers, and at all times of the day.

Many hunters take advantage of these their favored haunts and stationing themselves at the various springs in a

neighborhood, they secure many birds, as when frightened at one place they will fly to the next nearest spring, and so on around.

Just within the borders of this place stands a large dead fir, with wide spreading branches. This is a favored roost for the Pigeons during the night and also in the day, when not visiting the springs.

On a low level flat below this tree is one of the springs and during the past summer a flock of ten pigeons made this their home. They could be seen at all times of the day, perched upon this tree or flying to and from the spring.

After all the other pigeons seemed to have gone these few remained here until late in November.

Being on open ground this tree was hard to approach without alarming the birds but several hunters succeeded in killing six of the ten before they left.

Away from these springs the Pigeons are seldom seen during the mid day, but always in the early morning, or just before sunset.

Other places frequented are the oak groves and small scrub oaks as they are called here, where they feed upon the acorns which grow on these trees. In several birds which I killed their crop contained one-half teacupful of acorns.

Berries are also a favorite food and the buds of the hazel bush are used for food in the spring.

Their flight is easy and swift and it requires a good wing shot to bring them down.

The time of breeding, according to my observations, is in July. They do not breed in any locality in large numbers as did the pigeon of the east, elsewhere referred to in this article, but only a few pairs are found in any given locality, in close proximity.

Nesting upon dead stumps, rail fences and in oak trees and often upon the ground.

In that excellent work, "Life Histories of N. A. Birds," by Bendire, he quotes Mr. Poling as stating that from his observations, they breed at all seasons of the year, having seen young in February and also taken eggs late in the season.

Mr. Poling also brings forth the point that they carry their eggs with them while incubating, from place to place, and from facts which he has presented there is no doubt but what this is the case in many instances. As yet I have not observed this unique habit, but expect to the coming season.

The eggs are two in number, white in color and rather large for the bird.

A. GREGORY PRILL, M. D
Sodaville, Oregon.

Caspian or Imperial Tern.

Sterna caspia.

These beautiful birds are found breeding with the Ring-billed and American Herring Gulls, or Gravel Gulls of the Gull Islands, which are situated in the passage from Green Bay to Lake Michigan, and which are about 25 miles southeast of Escanaba, in the Upper Peninsula of Michigan.

The only pretense of a nest is a slight hollow in the coarse gravel upon which the eggs are laid.

This island is built up of layers and ridges, some ridges being very fine and others of coarse gravel. The birds nest only on one ridge, which they seem to have instinctively chosen for the protection of their eggs, as the stones in this ridge average about the size of the eggs and the color also, the resemblance was so near that one had to look sharp or he would tread upon the eggs.

While we were on the island they were circling around over our heads, but kept higher than the Gulls, though occasionally one would dart down at us and would come nearer than the Gulls

did, but they were hard to shoot as they generally kept out of range.

With their dark vermillion red bill, glossy greenish black crest and black feet they make a strikingly handsome bird, and a contrast to the Gulls, that I was surprised that the fisherman should call them all "Gulls" although one man did distinguish them by calling them "Mackerel Gulls."

Some 50 or 60 pairs of birds bred on this ridge and the Gulls were found breeding everywhere on the island except upon this ridge, even down to within a few feet of the water barely out of reach of the waves. The eggs of this species from 14 sets measured, average 2.47×1.72 . This average seems to be smaller than Davie gives it but is from careful and actual measurement however. The extremes of these 42 eggs measured 2.28×1.75 , 2.54×1.64 , 2.81×1.70 , 2.40×1.83 . Cones gives the number of eggs in a set as 2 but I have found that 3 is the number generally laid here.

There is quite a variation in the ground color and markings of these eggs as in this series the ground color runs from a dark drab or light stone to a greenish buff and were spotted and blotched with brown and lilac of different shades generally quite thickly and evenly marked with small spots over the entire surface, but a few eggs were splashed with heavier markings even as large as .60 in diameter.

I would like to hear through the columns of the OÖLOGIST whether this bird breeds elsewhere on the Great Lakes or not.

ED. VANWINKLE,
Vans Harbor, Mich.

A Tricolored Blackbird.

Agelaius tricolor.

Little has been written about this well-defined and distinct species of

Blackbird. This is probably due to its limited geographical range or the non-migratory disposition of the bird.

The distinguishing features of the species are dark red lesser wing-coverts, succeeded by white middle wing coverts and a more slender bill than any other of the *Agelaius*. The plumage of both sexes is bathed in a bluish gloss, the female with this embellishment is little less inferior than the male and retains traces of the white middle wing-coverts. This is a rather rare occurrence in the *Agelaius*, where the females as a rule are sober plumaged birds.

The breeding range, which is the entire territory frequented by the species, extends from the Columbia River southward throughout the whole of California. This range of territory corresponds closely to that of the Bicolored Blackbird's which is less limited extending farther southward into Mexico. Up to the present time the variety makers, whose untiring efforts and success are plainly verified in the latest check-lists, have not succeeded in forming or finding a sub-species.

The birds breed in immense colonies selecting large tule swamps or water-mootie flats for breeding purposes, but generally prefer the latter locations. They seem quite independent of water for I have found colonies nesting a quarter of a mile from water in water-mooties. Having taken occasion to visit some of these colonies every year I find they invariably consist of no fewer than several hundred birds, occupying an extent of some acres.

The largest colony the writer ever found had taken up their abode in a large tule swamp of an area equal to a square mile and they had so densely populated the whole swamp, that it was with difficulty that I moved about in it without upsetting some of the nests. The noise that proceeds from such a multitude of throats is astonishing and can be heard at a considerable

distance. When within a few hundred yards of a colony the noise partakes strangely of that made by a reaper in mowing a field of grain. The species is gregarious in the highest degree, never nesting in small numbers and constantly keeping in large flocks while feeding.

As we approach nearer a colony we see hundreds of birds coming and going, some bringing nesting material in their bills, others carrying food to the young. Now we have arrived at the edge of the swamp and are peering through the tules at the coarsely constructed nests in numberless profusion.

All the smaller birds must depart from the vicinity where they breed, for like the rogues which they sometimes are, they take possession of the newly constructed nests of the banished residents for foundations for their own bulky domicile. I have found nests of the Arkansas Goldfinch and Heerman's Song Sparrow containing a full complement of eggs thus used.

Two broods and occasionally three are reared in a season. The first set of eggs are deposited about the last of April and the second during the latter part of May or the first of June. The nest is a large, bulky structure coarsely made of grass, strips of tules and finer grasses, lined with fine dry grass and a few horse hairs.

The material that forms the bottom of the nest is firmly matted together with a layer of mud and sometimes horse dung is used as a substitute. The nest though made rather heavy by the layer of mud is but loosely fastened to the supporting vegetation which accounts for the many nests that are found tipped over. The nests are placed at a height ranging from a foot to ten feet from the ground or water.

The ground color of a series of eggs presents two phases of coloration, the light blue, which is the prevailing type and the light brown, which merge to-

gether. The light brown color is deepest on the large end of the egg and shades off into light blue or pale olive toward the apex of the egg. The eggs are spotted, blotched, clouded and marked with spots, blotches and zig-zag lines of black, lilac, brown, brownish-black and lavender, which are usually gathered about the larger end of the egg to form a circle or wreath.

Twenty-five typical eggs give an average measurement of 1.00x.73 inches. The extremes found in a series of twenty sets are: length 1.29 to .89 and width .78 to .63 inches.

Three eggs generally constitute a complete set; two and four eggs are not unusual complements, but five is extremely rare. In collecting in a large colony, I only found one set of five eggs where there were scores of three and four and quite a few young birds.

This species breeds in common with Bicolored, Red-winged and Yellow-headed Blackbirds. They, also, accompany in large flocks the herds of sheep which roam the sterile plains, feeding on the insects which, as they, delight in following these creatures for the subsistence which they derive from them.

EDMUND HELLER,
Riverside, Calif.

Another California Trip.

It is with growing interest that I read the many pleasant narratives recorded in these pages, and there is often awakened in me a desire to relate some of my experiences, just to be moving along with the rest of the boys.

No doubt there is more actual benefit to be derived from a more complete observation and discussion of a single family or species than in a general talk such as the narration of a collecting trip. But it is equally true that the description of a day's hunt through an "ornithologists paradise"; with its many in-

habitants, its varied excitements and glad surprises, is the more interesting of the two.

Of course it is exciting to poke your nose into the nest of some rare bird when you are looking after another thing, or after searching hopelessly, to come suddenly upon some rare find!

I have in mind a very pleasant trip that I took in the spring of 1891.

It was shortly after the middle of May that my friend Will Lawrence proposed a few days collecting trip.

We started from his home near Los Gatos early on one of those mornings that only Californian's can know. The sky was faultless, the only speck to be seen was an eagle soaring high above us, the whole bright scene of softly rolling emerald hills with here and there a blush of crimson blossoms or a crown of golden poppies, smiled in the bright sunshine and the birds all tried to outdo each other in singing the welcome to the glorious day.

About a month before we had passed over the same road on our way to a magpie roost where we got some fine specimens. I noticed many very familiar objects on our way. Here was a tall sycamore with a W. Red-tailed Hawk's nest in the top from which we had taken a fine set of eggs. It was now deserted. In another tree was a hole from which had been taken a set of Sparrow Hawk's eggs and there the bridge where the Phoebe's nest was. We had now gone about ten miles and as we reached the crest of a hill we let our horse stop to rest and looked across the valley to see the white dome of Lick Observatory shining from its place on Mt. Hamilton.

On the other side of the hill our road followed the Llagas creek for a few miles, then we crossed the stream and after an hours drive came to our first stopping place. We hitched our animal to a tree and wheeled the cart into the shade.

Our first piece of work was to visit a

bridge a hundred yards back on the road. A tiny streamlet ran along a rocky bed and as it reached the bridge had a fall of about 20 feet. The body of the bridge was on a level with the upper portion of the stream and underneath it was dark and cool. As we climbed down and under a sudden whirr of wings startled us, but we soon recovered, and what was our delight! There on a shelf of the rock, in a kind of corner where the mist and spray of the waterfall kept it always green was an oblong ball of moss and in the side a smooth round hole. We have all heard of the Water Onzels' nest but there's nothing like seeing one. "A thing of beauty is a joy forever" said I as I waited to see Will draw four white beauties from the nest—but the young ouzel he pulled out was such a beauty (?) that we left him to be a "joy forever" to his mother.

We left the bridge and soon struck the main stream which we followed up for quite a distance. As we went along we came upon a flat shelving rock that hung over the water and from under which a Black Phoebe flew. We soon discovered the nest which Will got by lying flat on the edge of the rock and reaching under while I held his heels.

The nest was the usual one of mud and rootlets and contained 5 of the prettiest eggs I ever saw of that species. They were very large and of a transparent creamy white with a few minute blood red specks scattered over them. During the day we found another nest of that species among the tangled roots of an upturned tree.

As we made our way up, the canon became narrower and large alder trees lined the sides of the stream. About the bases and among the lower limbs of these trees were masses of debris that had been brought down by the recent freshets. It was there that we found the Western Flycatcher nesting. It usually builds its nest from 1 ft. to 8 ft. from the ground. We took several sets

of their eggs but in each case the bird seemed not to be in the vicinity of the nest.

The nests, which all looked old and flimsy, were lined with shreds of redwood bark whose rich brown color made a pretty back-ground for the four creamy white, brown spotted eggs which the nest almost invariably contained. The nest was usually situated against the body of the tree at the base of a limb. I have found them on the ground under logs, in old stumps and in piles of drift, but always near the water, often over it. We fished our way down to the east and got a nice mess of trout. We hitched up and started back for the Llagas creek proposing to camp there that night and hunt along it the following day. It was near sunset when we found a suitable camping place. Our blankets were spread under an arch made by two large buckeye trees. The leafy canopy formed a kind of ceiling which reflected the light of our camp fire as we fried our trout and boiled the coffee, a supper fit for kings. After the fire had burned low we lay rolled up in our blankets looking through the leaves at the stars in the clear sky. But the music of the brook, the whispering breezes and the distant hooting owl soon led us into dreamland where we found numbers of nests each containing dozens of eggs of various sizes, we saw hummingbirds sitting on ostrich eggs and eagles nesting on the ground.

A chorus of singing birds awoke us, the bright sun was shining through the leaves and turning all the dew-drops into diamonds. A hasty breakfast of trout and coffee and we were off. Will started for the stream to wash his hands and as he passed under the opposite side of our sheltering tree I saw him dodge, then he laughed, and reaching up among the leaves and holding them apart called for me to look. As I came up I had occasion to dodge also then we both laughed. When a humming-

bird flies about an inch from your ear without you seeing her I assure you, you will be startled. I looked where Will was reaching up and saw what looked like the bowl of a clay pipe stuck to the limb. It was the nest of the Anna's Hummingbird that had startled us. It was made of the yellow down from the sycamore and resembled a small conical sponge saddled to the twig. It contained two pearly ellipsoids—and thus our luck began. As we reached the stream another hummer whizzed past us and poised in mid air over the water turning its jeweled head from side to side while its brilliant neck feathers shone resplendent in the sun and glittered with adamantine lustre. With a sudden turn it darted lightning-like to its nest where it lit without apparently checking its speed. This nest was 20 ft. above the water. It was composed of pure white willow cotton and decorated with green moss and lichens which were bound on with spider web.

Two youngsters greeted me with wide opened mouths and I descended in disgust. This was the Black-chinned Hummingbird.

We started up the creek but we seemed to have our best luck near our camping place. On a low limb of a sycamore I found a nest of the Arkansas Goldfinch with a set of four eggs in it. The nest was of fine grass and down. Will meantime found a set of the same and one of Lawrence's Goldfinch. In a shrubby live oak near by I took a set of four eggs of Black-headed Grossbeak, which were fresh but another set near by were badly incubated. Toward noon our luck gave out and I became restless and began to amuse myself by throwing rocks. In passing under a large sycamore tree I threw a green buckeye ball among its low hanging branches. It struck the trunk of the tree and burst into a thousand pieces, and as it struck I heard a hum of wings and a pretty Black-chinned Hummingbird darted

from its nest and poised before me then darted back again. Its nest was like the one seen earlier in the day but it contained eggs.

It would make my story too long to recite much more detail, so I will merely mention what we took during the remainder of the day.

During the afternoon we went below our camping place. In the rose thickets we found several sets of eggs of the Lazuli Bunting. The eggs usually three or four are of a light blue color and vary greatly in shape in the different sets. In the same brushy places we found the Long-tailed Chat nesting and had some success with them. Further down I came suddenly upon the nest of a Bullock's Oriole suspended about 10 feet above the water. I had to exercise a great deal of ingenuity to get it but was at last rewarded with a set of three fresh eggs. One of the prettiest nests I found was that of the Warbling Vireo. I took three that day each containing four eggs. The nest is a perfect basket made of blades of grass and leaves and hung in a crotch usually within reach from the ground. These pretty birds slip quietly away as you approach but I know they must treasure their cosy homes. Well to make a long story short our cans were full of eggs so we started home. I have had many delightful trips out this one had so many pleasant surprises that it is one of the cherished pages of my memory.

C. CHAMBERLIN,
Golden, Colorado.

Illinois River Valley.

From an Ornithological Standpoint.

Have you heard of this river? Perhaps, yes; perhaps no. Peradventure you have an idea that it is a small stream running through a prairie state, has no particular beauty and attractions from

an ornithological standpoint. But such is not the case.

Flowing across the state of Illinois, from the north east to the south west, it empties into the great Mississippi in its downward course to the Gulf. A river having not only beauty but historical events. In days gone by, flocks of brilliant Paroquets dashed hither and thither, buffalo wander over yonder prairie, and the swarthy Indian paddled his own canoe, and lived on the fat of the land. Ah! how changed.

The Illinois River Valley is a rich ornithological field notwithstanding the encroachment of civilization. The character of the country is varied enough to break the monotonous similarity which is found in so many places, and one will not tire of traveling within its borders.

The valley consists of bottoms, meadows, fields and bluffs.

The bottoms or low lands, which are an important factor in a large avian fauna, predominate along the river. The heavy timbered portions, chiefly elm, maple, cottonwood and sycamore, extend along the river, broken here and there by long stretches of willow-swamps known to fame as the resort of *Prothonotaria citrea*, and sloughs, and small lakes innumerable. The sloughs, in most cases, surround small bodies of water, and consist of a heavy growth of reeds, flags, wild rice, and marsh grass.

Here and there where bluffs extend to the river, high banks are found and sandy beaches.

Between the low lands and the bluffs are fine meadows where the Bartramians delight to dwell, and grain fields out of which comes the merry whistle of the Bob-white.

We next approach the hills, covered with thickets of hazel brush and blackberry vines, in which lives the noisy Chat, by growth of oak and hickory, in whose lofty branches the Buteos delight to build, and mingled here and there

are ravines out of which flow cool springs and pleasant waters.

Beyond, the prairies of what remains since thriving farms have been established, but we go no farther.

The reader will therefore see that the valley is so adapted that quite a variety of bird life may be found.

It has been discovered by investigation that the tide of migration follows the water courses. The Illinois is so situated that it forms an important highway to transient species. The vast multitudes of transients moving upward through the great Mississippi Valley in the spring, do not all keep in the direct course of this river. Many branch off up the Missouri Valley, some up the Ohio, the majority probably follow up the Mississippi, but those bound for the region of the Great Lakes, strike up the Illinois, cross or follow up Lake Michigan and thus reach their summer home.

Food and shelter are two essential elements which tend to allure transient species. With both of these the Illinois is abundantly supplied.

[The great numbers of water fowl passing semi-annually through the valley, find an abundant supply of both food and shelter in the numerous ponds, lakes and sloughs.

The smaller species keep to the timbered bottoms, the brush piles, the weedy fields and roadside. Thus the Valley is well adapted to both sustain and shelter the thousands of transient birds.

The great variety of resident and summer resident species to be found in the valley, is due also to the food and shelter afforded.

The Illinois has fully her share of summer residents. The character of the country is such as to insure good nesting sites for many different species. From the bottoms to the hills will be found a rich field for an ornithologist's research.

While of course the number of residents do not begin to compare with that of summer residents, it is by no means small.

The variety of winter residents depends entirely on the severity of the season. If mild, many of the transients remain, while on the other hand, if the weather proves severe, they remove south and are replaced by more hardier species from the north. The Snowy Owl and Crossbills are an example of such.

The difference in latitude and longitude between the source and mouth of the Illinois is enough to effect the fauna of each extreme. For instance, the Turkey Buzzard and Summer Tanager are found in the Southern half of the valley only, and the Bobolink and Yellow-headed Blackbird belong to the northern half. Some birds, summer residents at the source, are residents or winter residents at the mouth. I have no doubt but what upon investigation the western forms of certain species, such as the Maryland Yellow-throat or Meadow-lark, will be found to predominate at the mouth of this river, and the eastern forms predominating at the source.

Many visitors appear on the river which we otherwise would not have were it not for Lake Michigan. These species are gulls, terns and others of like character, appearing as either summer or winter visitors. At Peoria, where many of my observations have been made, I have noticed that strong northeast winds generally bring the gulls. Undoubtedly they drift down from the Lake with the wind. Other marine visitors are not uncommon. Western and southern visitors, or perhaps I had better say stragglers, are frequently taken.

So far, I have endeavored to present a descriptive article on the Illinois River Valley as a collecting field for an ornithologist. Very little, if any

whatever, has been said about the birds themselves, the hunting and shooting of wild fowls, their resorts and points of interest on the river.

Wild fowl shooting now is not what it was fifty years ago, at least that is what they say. Nevertheless it attracts many hunters still, and at some points is very good. The lakes and sloughs are a great rendezvous to the ducks and geese in their migration. Among the most noted of hunting resorts on the river is Spring Lake, situated some twenty or thirty miles below Peoria. Others of *probable* equal importance are found at other points of the river, but I pass on.

Interesting objects are the heronies of the Gt. Blue Heron, American White Egret and Cormorants. It is also reported that the Wood Ibis has been found at Potato Lake, in the southern portion of the valley.

The Bald Eagle and the Fish Hawk are not unknown in this vicinity, and not a few eyries exist in the noble trees in the bottoms.

Of the beauty of this river I could say much, if space were mine. Nature has equally endowed it with interesting and beautiful features, as it has with its birds, its trees and its flowers.

WM. E. LOUERS,
Peoria, Illinois.

VIRGINIA RAIL IN CALIFORNIA. On the first of October, 1892 while hunting, a friend of mine shot a male Virginia Rail, the skin of which I now have. The bird was standing on the bank of a rushing mountain stream near here. It must have been sadly lost, as I never before saw any water birds in such a locality. I do not find the occurrence of the Virginia Rail recorded West of the Rockies. Would like to hear from others on this subject.

JOE GRINNELL,
Pasadena, Cal.

FEBRUARY CONTEST.

One-hundred and thirty five Judges.

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2. California Vulture. 372.
3. Collecting Black Vulture Eggs. 276.
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5. Scientific Osteology for Amateurs. 226.

The following were each awarded a duplicate of the fifth prize:

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A years subscription to the OÖLOGIST was awarded:

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Only thirteen Judges named the winning articles and only *one* their exact order.

The Judges prizes were awarded as follows:

1. No. 123—O. E. Crooker, Madison, Wisconsin.
2. No. 107—A. G. Prill, M. D., Soda-ville, Oregon. 2, 1, 4, 3, 5.
3. No. 116—Edmund Heller, River-side, Cal. 1, 2, 4, 5, 3.
4. No. 133—S. B. Baker, Lexington, Ky. 2, 1, 5, 4, 3.
5. No. 33—A. R. Hutchinson, Gaines, N. Y. 3, 1, 2, 4, 5.

Above we designate the prize won—the Judge's recorded number—their name and address and the order in which they named the winning articles.

The following were each mailed a copy of the World's Fair Almanac.

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Arthur Lohman, Wisconsin.

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Bert Gillette, New York.

Walter Truitt, Kansas.

L. Geo. Woodruff, New York City.

R. C. Alexander, Michigan.

J. V. Crone, Iowa.

All prizes were mailed March 20th.

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This effusion may bring back some fond recollections,

So you, with the writer, can mourn and rejoice.

How well I remember my first egg collection,
The gems it contained made me thrill with delight,

It embraced twenty singles of all shapes and colors.

End-blown, with holes that were not "out of sight."

I called them by names that were not scientific,
They were Big Chippy, Linnet, Little Chippy
and Jay.

And a good many others,—but I'll spare the infliction

For this rare collection has vanished to stay.

We all can remember the trips we have taken,
The trees we have climbed; and the falls we
have met,

And oft in our minds sadly lingers the mem'ry,
Of the nests we couldn't reach and the eggs we
didn't get.

There are many collectors who're after rare species.

That nest in the ocean far off from the land,
Tis they who find out what is true tribulation,
When they start to go on a trip that is grand.

I can stand disappointments and falls, and go hungry,

I can wade through the mud and stay out in the rain,

But when seasickness comes and claims me his victim,

I'm free to confess it gives me great pain.

And after it's over, you should be very thankful,
That your chances were greater than those of
this verse,

For this missed the basket by so short a distance,

I've concluded it could be but little bit worse.

C. BARLOW, Santa Clara, Cal.

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J. W. BANKS.

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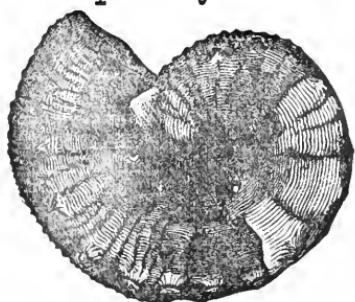
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Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad. paid then: *is paying yet*. He has been kept constantly busy, employs three men to assist him, clearing *on their labor* from \$10 to \$15 a day distributing circulars at \$.00 per 1000 for many firms who saw his ad. in THE HERALD. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm who employ you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30, \$15 in advance and \$15 when work is done. Parents make your boys a present. Start them in this growing business. Begin this neat bus'ness before some one in your county gets the start of you. "Come in on the ground floor." Instructions How to Conduct the Business. Free. to each distributor ONLY, who sends us \$2.40 cash or postage stamps for a 4 line "ad."

AGENTS HERALD,

No, 171 South 8th Street, Philada', Pa.

"It is worth the price to every person
who even reads a newspaper."—Darlington
Journal.

THE JOURNAL REFERS TO

BLUE PENCIL RULES.

BY

A. G. NEVINS.

A Pocket Primer for the use of Reporters, Correspondents and Copy Choppers. Short, simple and practical rules for making and editing newspaper copy, and of equal value to all who wish to write correct English.

Sent on receipt of price. Price, 10 cents per copy. ALLAN FORMAN, Publisher, 117 Nassau Street, New York.

CARR'S NATURAL HISTORY STORE

Sea Shells, Corals, Minerals, Bird Skins and Eggs, Curios, Supplies for Taxidermists, Entomologists, Botanists and Oologists. Taxidermy in all Branches of the art. Gold fish and aquariaums.

40 page Illustrated Catalogue for 2c stamp.

C. F. CARR, Madison, Wis.

Excursion Club to Attend the World's Fair.

If you have any desire to visit the World's Fair at Chicago, bear in mind that the United World's Fair Excursion Co. is a sound organization, with ample capital to fulfil their promises. The company sells tickets on the installment plan, refunding all but first payment if you fail to go, apply to United World's Fair Exposition Co., N. E. Dep't., 406 Exchange Bldg, Boston, Mass.

PREMIUMS offered with the OÖLOGIST in '88 '89 '90 and '91. We have a few of the following left—all wrapped ready for mailing and as long as they last will send prepaid at prices quoted—which are about $\frac{1}{2}$ usual ones. No. 1—Chideony Geode 8c. No. 2—Call Bell 20c. No. 3—Large Acorn Barnacle sc. No. 4—1 egg of each. R'dwg. 263, 272, 312 and 370. 2c. No. 5—1 egg each. No. 1, 63, 135, 149a, 237 and 271, 20c. No. 6—Egg of Noddy. 20c. No. 7—9 in. Brass *Bull Blown* 20c. No. 8—Egg case of Periwinkle and Lucky Tooth of Cod 20c. No. 9—5 in. Horse-shoe Magnet 2c. No. 10—P'k'g of Afrean Coraline sc. No. 11—A fine spec. of ea. *Serita* and *Chama* sc. No. 12—2 N. Z. Beetle Nuts sc. No. 13—2 Resurrection Plants 10c. No. 14—Fossil Sea Urchins 6c. No. 15—“Kid Couch” sc. Sea Fan 9c. No. 16—2 Boxes Pharaoh Serpent Eggs sc. No. 17—Large Alligator Tooth 7c. No. 18—Egg of Hammerhead Shark 10c. No. 19—Ham Shell sc. No. 20—Phillipine Sea Urchin 6c. No. 21—A Carved Brazilian Ivory Nut 10c. No. 22—Spec. Polished Agate 9c. No. 23—One egg of each, Nos. 1, 12, 13, 22, 231, 214, E. S. 211, 258, 261, 378, 278, 289, 304, 460 63, 133, 157, 320 282 and 69. 55cts. No. 24—One egg of ea. 123, 145, 149a, 204, 237, 254, 244, 260, 264, 275b, 300b, 306, 63a and 496, 75c. No. 25—35 named Small Shells, 75c. Address, FRANK H. LATTIN, Albion, N. Y.

PLEASE STOP MY EXCHANGE NOTICE AT ONCE. You can talk about your papers, but I never saw any that could hold a candle to the OÖLOGIST. I have exchanged \$90.00 worth of stamps just by putting in that little Ex. notice. C. L. ACEY WHITE, Omaha, Neb.

**Woven Wire FENCING
RABBIT AND POULTRY NETTING.**

★ THE VERY BEST ★

MCMULLENS

SEND FOR FURTHER INFORMATION.
The McMullen Woven Wire Fence Co.,
118 and 120 N. Market St., Chicago.



21 Sea Shells in neat cabinet, named (scientific) and illustrated catalogue or Nat. Hist. specimens, post paid, 30c. C. F. CARR, Madison, Wis.

Scientific American Agency for PATENTS

CAVEATS,
TRADE MARKS,
DESIGN PATENTS,
COPYRIGHTS, etc.

For information and free Handbook write to MUNN & CO., 361 BROADWAY, NEW YORK. Oldest bureau for securing patents in America. Every patent taken out by us is brought before the public by a notice given free of charge in the

Scientific American

Largest circulation of any scientific paper in the world. Splendidly illustrated. No intelligent man should be without it. Weekly, \$3.00 a year; \$1.50 six months. Address MUNN & CO. PUBLISHERS, 361 Broadway, New York City.

100 Varieties of Eggs,

\$7.00.

The above offer holds good the year around. All collectors and readers of this paper should send stamp for my new price lists of Birds Eggs.

Address at once,

**WALTER F. WEBB,
GENEVA, N. Y.**

Taxidermists, Collectors, Trappers.

I am pleased to announce that I have purchased the secret by which the French tanners manufacture their glove kid and have so changed it as to meet the wants of taxidermists and trappers. I will be pleased to send a large sample of Panther skin, prepared with this tan, my catalogue and directions for tan. The Panther skin cost me a large sum and I can only send to those that enclose 10c. in their letter. The sample may be returned and will be accepted as 10c. toward a bottle of Babbitt's Glove Kid Tan.

BABBITT'S GLOVE KID TAN

Is the quickest and best tan on the market and is warranted to do a fine grade of work. Price \$1 per bottle, postpaid (sufficient to tan twelve Fox skins). A large catalogue of supplies used by Taxidermists and Naturalists in general 2c.

James P. Babbitt,
10 Hodges Ave. Taunton, Mass.

\$300.00 WORTH OF PRIZES

Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
THE OÖLOGIST.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7 50
Ridgway's "Manual of North American Birds".....	7 50
Chamberlain's "Nuttall's Ornithology" (2 vols.).....	8 00
Goss's "Birds of Kansas".....	7 50
Wilson's (and Bonaparte's) "American Ornithology".....	7 50
Maynard's "Birds of Eastern North America" (text complete). 15 00	
Washington Irving's Works, 10 vols.....	7 50
Wm. M. Thackeray's Works, 10 vols.....	10 00
Chas. Dickens' Works, 15 vols... 11 25	
Jenk's "Comprehensive Commentary of the Holy Bible" 5 large 900 paged Volumes.. 25 00	
Sir Walter Scott's Works, 12 vols 12 00	
\$10 worth of Phonographic Books and Publications.....	10 00
An 8-qt. Jack Frost Ice Cream Freezer	6 50
A Due-Bill good for \$31.50 towards a new \$45.00 Marlin Repeating Rifle.....	31 50
A Due-Bill good for \$33.00 towards a new \$45.00 American Union (same as New Home) Sewing Machine.....	33 00
A Due-Bill good for \$12.00 towards a new \$20 double case Odell Type writer.....	12 00
2nd Prize each month will be a part of "Maynard's Birds of Eastern North America," each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50.	
3d Prize Langille's "Our Birds in Their Haunts", \$3 00	
4th Prize Brewer's "North American Oölogy" unbound, no plates, original price about \$3 00.	
5th Prize- Baird's Review of American Birds" originally sold at \$2.00.	

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded the OÖLOGIST for 1893 bound in cloth and gilt.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the OÖLOGIST.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than May 1st. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.60.

2d A handsomely bound book "Small Talk about Business."

3d A combination stereoscope.

4th An agate watch charm.

5th A Pocket Knife.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 cts.)

All Judges' prizes are sent by mail prepaid.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.



VOL. X.

ALBION, N. Y., MAY, 1893.

NO. 5

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

VALUABLE BIRDS EGGS for sale very cheap. Send stamp for lists. R. FIELD, Box 246, Brockville, Ontario, Canada.

WANTED.—Collectors who have sets of Hummers for sale or exchange, to send their lists to H. W. ISAACS, Prospect House, Niagara Falls, N. Y.

TO EXCHANGE.—Two parts Maynard's Birds of Eastern North America, one in leather and boards, other in manilla. H. C. LILLIE, Ann Arbor, Mich.

EGGS of the Raptors of Nebraska to exchange for Sea birds eggs, order Longipennes preferred. J. ELLIS McLELLAN, Neopaska City, Nebraska.

WANTED.—Eggs in sets and North Ameri- can postage stamps. Can offer in exchange American and English singles, printing-press, school books, novels and many magazines. JOHN B. SEYMOUR, Clinton, Oneida Co., N. Y.

EGGS in Sets to Exchange for some. Send lists. Have also several specimens Indian Pottery to exchange for Eggs. W. A. OLDFIELD, Port Sanilac, Mich.

FOR EXCHANGE.—Is in several Star Bicycles for lower Star or Safety, Vol. VI, Golden Days and 62 numbers of Volumes III, V and VII for best offer. All answered. W. P. PRATTE, Chatham, N. Y.

TO EXCHANGE.—Deer and Antelope heads, skins of Western birds and eggs for eggs, skins or mounted birds. W. H. PARKER, P. O. Box 1596, Salt Lake City, Utah.

ODELL Type Writer (Smith & Wesson Peacock 32 cal.) Glass blow Gun 5 ft. long. All in good order. For best offers. No eggs wanted. FRANK STUART, Umatilla, Wash.

TO EXCHANGE.—The model book of Natural History unsoiled, with paper cover, containing over 860 pages and 500 illustrations, for best offer in first-class sets. ARTHUR L. POPE, Box 348, McMinnville, Oregon.

TO EXCHANGE.—A new double action, nickel plated, .32 cal. centre fire American Bulldog revolver, and 25 cartridges, for best offer of boxing gloves. LOREN D. A. SNYDER, Manchester, Iowa.

WANTED.—3, 4, 5, 6, 8, 10, 15, 30, 50 cts., one, two, three, four, five dollars cancelled Columbian stamps, present issue. Will give "Davie's Eggs," Climbers, Papers, ARTHUR M. LINSEY, Northford, Conn.

TO EXCHANGE.—Manton's Taxidermy, new cloth bound, for first eight numbers of Vol. 6 (1886 Oologist). Must be in good condition. ED DOOLITTLE, Painesville, Ohio.

WANTED.—First-class sets of eggs not in my collection, have for exchange settings of pure Hurricane Pit Games also Pit Game bantams, \$2.00 per B. Will send settings at same price. Send for particulars. BURTON H. JOHNSON, Box 333, Orange, Mass.

I HAVE a few choice sets of the American Magpie that I will sell at rate of 12 cents an egg. If more than one set is desired to show variation will sell at 10¢ per egg. Sets range from five to eight eggs. F. M. DILLE, 806 Boston Building, Denver, Colo.

ENGLISH or CHINESE PHEASANTS. The most beautiful birds in this country. We are now holding orders for 10¢ at \$1.00 for B. Can be set under done to the hens. Address, H. A. BRUSH & SON, Montpelier, Vt.

SALE or EXCHANGE.—Latest Shipman Automatic Gun (one 1 hole power) in good condition. Bicycles not wanted. E. G. BIDLAKE, 17 Van Allen St., Auburn, N. Y.

I am pleased to say that I have on hand a full stock of these cutters, rarely mentioned by John A. Morden, in the last issue of this paper. Made to fit most 16 gauge shot guns and taking 32 or 38 cts. of F. shells. Price only 1.50 each. Every collector of small birds should have one. 22 shot gun per box, 18. 80¢ per box; decapper and loader 50¢; primers, 6¢ per box; wad cutter, 1¢. JAMES P. BABBITT, Tumton Mass.

WANTED.—Good compound microscope; to exchange with insects collectors preferably in South and West. Have insects, species, mostly unnamed will take such, fresh unmounted preferred. PERCY A. SMITH. Lyndonville, Orleans Co., N. Y.

WANTED.—First-class Skins and Birds in the meat (cash) especially desire Tufted Puffin. Gannet, Crested Auklet, Terns, Gulls, Ducks, G-eese, etc. Send lists. EDGAR A. FERO. 116 Ontario St. Cohoes, N. Y.

WANTED.—An old style powder-ball-and-caps revolver. Colts with large calibre preferred. Can offer Am. Bittern 14-15, Wilson's Phalarope 14, R. T. Hummer 11-2. J. V. CRONE, Indianola, Iowa.

EXCHANGE NOTICE.—Every one sending me \$1.25 in money or \$2.00 worth of Indian relics or desirable sets. (Write first) I will send them a pair of my new climbers. Have worked for years on climbers and have at last got a pair that works to perfection on trees. Made from the best steel and warranted to hold any weight. The best climber out. CLARENCE H. WATRONS. Chester, Conn.

MICROSCOPE.—Will sell at about half price a Gundlach Student Microscope with two eye-pieces and 2 in., 2-3 inch and 1-5 inch best objectives. Perfect order. List \$5. Rare bargain. Want Lady's Safety Bicycle. F. D. PHINNEY. 8 Brighton Ave., Rochester, N. Y.

TO EXCHANGE. Eggs, relics, minerals, stamps, curiosities, coins etc. for same. 30 foreign stamps for every perfect arrow head or mineral sent me. Correspondence solicited. W. G. STUTZMAN. Kent, Ohio.

EXCHANGE NOTICE.—Correspondence with naturalists desired, particularly in Suffolk Co., N. Y. Have Books, Papers, Marine Curiosities, etc., to exchange for eggs in sets with data, or skins. A good collector's gun wanted for Cash or exchange. F. TUTTLE STERLING. Eastport, L. I., N. Y.

COLLECTORS having Air-guns, revolvers, telescopes, telegraph instruments, musical instruments and other articles to exchange for A I eggs and skins. Send description for offers to THOS. STANLEY, Banner, San Diego Co., Calif.

FOR SALE or EXCHANGE.—Electrical Reviews, Scientific Americans, Popular Science Monthly's, Harris's Insects Injurious to Vegetation (with colored plates), 16x camera and outfit, 3x5 printing press and outfit, insect case, and magic lantern and outfit. Want Smith & Wesson's or olt's revolver or Stevens' rifle. All letters answered. HAROLD SANDERS. Davenport, Iowa.

60 story papers, novels, etc., half of three volumes Golden Days, Manton's Taxidermy, set 2-1 Red-shouldered Hawk, for ornithological literature. Cones' Key preferred. MILLARD VAN WAGNER. Gretna, N. Y.

WANTED. Vol. I. Collectors and first five vols. Oölogist. Foreign newspaper stamp or twenty varieties stamps for each number, or for any Ornithological or Philatelic papers. RALPH H. ROCKWOOD, Waterville, Maine.

TO EXCHANGE. A nickel without the word "Cents", also back numbers of ornithological papers and magazines; for first-class eggs. Sets with data preferred. NEIL F. POSSON. Daw's, Genesee Co., N. Y.

CALIF. MURES' EGGS.—I can collect a very handsome series for you at bed-rock rates. Send for my circular of prices. Even 10 eggs will show great diversity of color and will cost you only a trifle or you can secure a large number. They make the best show of any eggs. Will exchange for common sets books as follows: "Photographic Instructor" at \$1; "Left on Labrador" at \$1; "Off to the Geysers" at \$1. Offer any sets you have and get some Cal. Murres' eggs and be happy. Address, C. BARLOW, San Jose, Cal.

EACH MONTH, for a year, I shall offer three stuffed birds at 50c. each, postage 6c. each. Every bird is warranted my best work and can be returned if not as represented. This month I offer till my stock is exhausted, Black-capped Chickadee, Black Junco, Song Sparrow. The three species, 150, postpaid. JAMES P. BABBITT. Taunton, Mass.

FOR SALE.—A collection of mounted birds, 100 varieties all highly plumaged, case is of oak, glass doors, with brass trimmings. The above will be sold at a bargain. For full information address LOCK BOX 851, St. Johnsbury, Vt.

REMINGTON RIFLE. 4x5 camera and Davie's Eggs, for sale or exchange for stamps. All answered. A. B. BLAKEMORE. 280 St. Andrew St., New Orleans, La.

EXCHANGE.—Singles and sets for sets. Send your list and receive mine. FRANK B. JEWEY. Lamanda Park, California.

TO EXCHANGE.—Fine 1st class singles and a few sets for common northern sets or skins. Send lists. A. H. W. NORTON. Box 918, San Antonio, Texas.

COINS WANTED.—If you have any old U.S. Coins, please send list stating prices. Old U.S. and Confederate stamps wanted. CHAS. G. COLLINS, Box 431, Garden City Kas.

EXCHANGE.—Egg for hatching of thoroughbred Black Minoreas for sale, or exchange mounted birds, eggs or anything I can use. Head of pen scores 95. Send lists. VERDI BURTON. Branchport, N. Y.

FOR EXCHANGE.—I will collect fine Cal. sets with nests if desired. Collected by myself and positively identified. Thurber's Junco, Louisiana Tanager, Swainson's Hawk, Costas, Black-chinned Anna's Hummers, Least Vireo, Cat Screech Owl and many others. Desirable sets wanted. RALPH ARNOLD. Pasadena, Cal.

WE WANT skins of Carolina Parakeet and Passenger Pigeon and head of American Bison, Writte, state lowest cash or exchange price. F. H. LATTIN & CO., Albion, N. Y.

WANTED.—"Davie's Eggs," for stamps and standard books and magazines. STEPHEN J. ADAMS. Cornish, Maine.

WANTED.—Winchester or Marlin Repeating Rifle .22 or .38 cal. or Cones' Key. To offer, skin of Whooping Crane, 142 ga. Winchester Shot-gun, sets of this locality and perhaps cash. FREDDIE NORDIN. Mountain Lake, Minn.

FOR SALE CHEAP.—A collection of choice relics, minerals, curios, bracket saw, type, insects, in cork lined cases, taxidermist's tools, moss, stuffed specimens, books, book case, oologist's, 8 drawer cabinet, other articles. Send stamp, all unanswered, failing health the cause of this sale. Address, TAXIDERMIST, Box 20, Baker, O.

PLEASE STOP MY EXCHANGE NOTICE AT ONCE. You can talk about your papers, but I never saw any that could hold a candle to the OOLOGIST. I have exchanged \$30.00 worth of stamps just by putting in that little Ex. notice. CHAS. ACEY WHITE, Omaha, Neb.

EACH MONTH, for a year I shall offer three stuffed birds at 50c. each, postage 6c., each: every bird is warranted my best work and can be returned if not as represented. This month I offer, till my stock is exhausted Black-capped Chickadee, Slate-colored Junco and Song Sparrow. The three for only \$1.50, postpaid.
JAMES P. BABBITT, Taunton, Mass.

I HAVE sets of each of the following eggs to exchange: Red-tailed, Red-shouldered and Cooper's Hawks; Great Horned and Barred Owls. Will give a good trade for Coue's Key or will trade for good Indian reliques. JASPER, BROWN, Norway, Benton Co., Iowa.

FOR SALE or EXCHANGE.—2 live Screech Owls, pair of horse clippers, microscope. Will give foreign stamps for *used* Columbian stamps, (1893). Send stamp for particulars. W. A. JOHNSON, 121 W. Brooks St., Galesburg, Ill.

WANTED.—We can use a large number of extra fine Warbler skins and eggs at once, also skins of other desirable birds; for which we offer fine Birds Eggs, Shells, Curios, etc. F. H. LATTIN & CO., Albion, N. Y.

WANTED.—A first-class camera will exchange my collection and Duplicate Eggs. Send for list and what you have to offer. H. L. ROGERS, Howells, N. Y.

FOR EXCHANGE.—A 22 cal. Flobert rifle, self shell extractor, nearly new; for Davie's Nest and Eggs, and eggs not in my collection. All letters answered. FRANK HARTLEY, Box 456, Castile, N. Y.

I AM GLAD to see the Ootologist improving. Would try to get more subscribers but almost every collector I know already takes it. From my last ad, in the exchange column I exchanged over 100 sets besides a number of singles. With best wishes for the future I remain EDWARD WALL, San Bernardino, Calif.

I HAVE disposed of a fine lot of eggs through
the ex. notice in the OOTOLIST. THEO MILLER, Lancaster, C. B., Va.

DISCONTINUE my Ex. Adv. as I have more Birds than I know what to do with. The Oologoosis is the best Adv. paper a going. Long may it live. E. B. PECK, Canandaigua, N. Y.

CIGARS.—Want you to try my celebrated
cigars. Send stamp for price list of samples.
Address, G. W. WALTON, Postmaster, Fal-
mouth, Pa.

FOR SALE or EXCHANGE.—A copy of the Naturalist's Guide by C. J. Maynard, \$1.50; A copy of the Canoe and Boat Builder, \$2; A Bifilar cornet with extra mouth piece and mute. All in nice case, \$25; A very fine flute in nice case, cost \$24, has been used but little, will sell or exchange for \$ 8. Will exchange any of the above for birds eggs, skins or bicycle in good condition. All letters answered. E. L. HALEY, Phillips, Maine.

WANTED.—Rare 1st class eggs singles and sets, the following A. O. U. numbers especially 204, 205, 206, 7, 10, 329, 328, 349, 351, 352, and other rare specimens. Also "Nests and Eggs of N.A. Birds," by O. Davie, "Key to N. A. Birds," Cones, and Batty's Practical Taxidermy. Would also like taxidermist's instruments. Have to exchange very rare and choice postage stamps in Newfoundland, Canada, New Brunswick, Nova Scotia and other countries. Scott's catalogue 53rd edition used. Address, R. SANDFORD, 17 Cottage Street, Rutland, Vermont.

SKINS to EXCHANGE.—First class, fresh skins of shore birds from coast of Maine to exchange for eggs and skins from other localities. All letters answered. A. B. CALL, A. M. Townsend, Vt.

WANTED.--Reptiles and Batrachians (snakes, frogs, toads, salamanders, etc.) especially such as are found in New York state, full data must accompany each specimen. Will exchange Birds skins or eggs for same. Address TRUMAN R. TAYLOR, Geneva, N. Y.

FOR EXCHANGE.—Bridled Tern 1-1, Sooty Tern 1-1, Noddy Tern 1-1, Common Tern 1-2, Arctic Tern 1-3, Black Tern 1-2 1-3, Black Vulture 1-2, Am. Sparrow Hawk 1-4, Red-tailed Hawk 1-2 1-3, Red-shouldered Hawk 1-3 1-4, Am. Long-eared Owl 1-5, Screech Owl 1-4, Texas Screech Owl 1-1, Limpkin 1-6, Least Bittern 1-4 1-5 1-6, Florida Gallinule 1-7 1-8 1-10, Am. Coot 1-1-8, Bartramian Sandpiper 1-1, Bobolink 1-4 1-5, Yellow-headed Blackbird 1-1 1-5 1-6, Bicolor Blackbird 1-4, Long-billed Marsh Wren 1-4 1-5 1-6, Murie 1-1, Cliff Swallow 1-1 1-5 1-6, Anna's Hummingbird 1-2, Leach's Petrel 1-4, Bohemian White I.S. Rock Pigeon 1-8, Meadow Lark 1-4 1-5, CHARLES H. ELDIDGE, 314 Chamber Commerce, Chicago, Ill.

WANTED.—Old-time copies of either "Cones' Key" or "Ridgway's Manual." Will give cash or exchange. Write stating conditions, *edition* and best terms. F. H. LATTIN & CO., Albion, N.Y.

I will give specimens of any kind, advertising space in the *Geologist*, and for extra good
offers *anything* I enter for sale or pass by CASH
for trifles a Indian Relics, or former or 2d
hand books in Natural History in good condi-
tion, ornithology or zoölogy preferred; a set of
the "Natural History of New York" and copies
of "Golds' Key," especially desired. F. H.
ALMERIN, 300 ALMERS ST., N.Y.

All future transactions in Birds' Eggs should be and will be based on the principles given in the New Standard Catalogue.

**Eureka Silver Plating Com-
posure.**

**NOTHING LIKE IT! SOMETHING
ENTIRELY NEW!**

Will make old silver instruments or silverware of any kind look like new, plates brass or copper and no battery needed. Now is the time to make your brass instruments look like *Solid Silver*. Sample prepaid 10 cents. Agents wanted. Address F. C. HUBBARD, Lock Box 161, Geneva, Ohio.

**LOOK HERE!
Can You Beat This?**

25 varieties of first-class American eggs, including Black-billed Magpie, Am. White Pelican and Cal. Murres, will be sent post-paid to any address in U. S. for \$1.00. Also 100 varieties of Am. eggs for \$5.00. Send your orders at once. Address

**SHELLEY W. DENTON,
Wellesley, Mass.**

YOU CAN MAKE \$4 PER DAY

Handling the FASTEST SELLING article on record
OVER A MILLION SOLD IN PHILADELPHIA!

No matter where you reside; everybody wants them. Write to-day, enclosing 2¢ stamp and we will mail you 4 Free Samples and full particulars, which will enable you to commence work at once. Circulars free. SMITH MFG. CO., No. 171 Pepper Brdg., Phila., Pa.

New Standard Catalogue
OF

North American Birds Eggs

COMPILED BY

FRANK H. LATTIN,

Assisted by Capt. Chas. E. Bendire, J.
Parker Norris, Esq., and
Capt. B. F. Goss.

It gives the Common and Scientific name of every North American Bird according to the A. O. U. Nomenclature. It also gives the A. O. U. Numbers as well as those of both Conest and Ridgeway, and last but not least it gives the value of eggs of *nearly every species*, over one hundred of which never appeared on any printed list before.

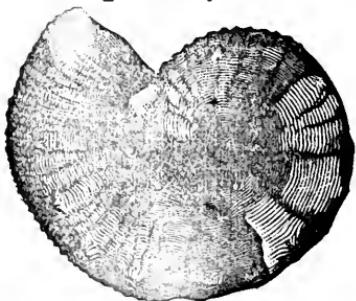
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THE OÖLOGIST.

VOL. X.

ALBION, N. Y., MAY, 1893.

NO. 5

On the Habits of the California Quail in New Zealand.

BY JOSHUA RUTLAND.

The many foreign animals intentionally and accidentally introduced into New Zealand furnish excellent opportunity of observing the action of instinct when a species is suddenly exposed to new conditions, and of ascertaining how long inherited habits will persist, after their utility has ceased, or after they have become injurious rather than beneficial.

Of this displacement or aberration of instinct as it may be termed, the California Quails (*Ortyx californica*) now abundant throughout these islands furnish two good examples. Before describing these it will be necessary to give some account of the locality wherein they have been observed.

The narrow valley of the Pelorus that drains into the head of the Pelorus Sound and inlet on the southern shores of Cook's Straits, is walled in by steep mountain ranges from two to three thousand feet in elevation. Towards its mouth or for the first eight miles the average width between the bases of the mountains is about ninety chains; after which the valley contracts rapidly until it becomes a mere gorge, the mountains constituting the banks of the river.

The level land consists of terraces formed while the valley was a portion of the Sound and of low alluvial flats formed by the Pelorus River. Though these flats are all subject to inundation, portions of them are only covered by the very highest floods, which occur at long intervals, while other portions are low and swampy, being in many places raised only a few inches above the ordinary level of the river.

Except where fire or artificial clearing has made room for fern and grass, the mountains are clothed from base to summit with dense evergreen bush. The greater portion of the level land is now either in grass or under cultivation, the low parts referred to being however still covered with scrub, rushes and the native flax (*Phormium tenax*). Cover indeed is every where abundant, the vegetation of the valley being particularly rank.

It can be seen from this description that there is a wide choice of situations for ground nesting birds, yet the favorite building place of the California Quail, is amongst the rushes and flax in the low, swampy parts of the valley.

The climate of the Pelorus being extremely uncertain,—heavy rains and floods occurring at all seasons of the year, and the river frequently rising five or six feet in a few hours—the danger the Quails incur in selecting the low ground for their nesting places is obvious. In this respect they present a marked contrast to the indigenous Gray Duck (*Anas superciliosa*) which almost invariably places its nest above the highest floodmark, though it brings its young ones to the water immediately after they are out of the shell. I am only aware of one exception to this, a Gray Duck having made its nest in a drained swamp, out of sight of the Pelorus River but not high above it. The indigenous vegetation (consisting of various species of *Carex*, *Typha angustifolia* and *Phormium tenax*) being destroyed and grass substituted, the bird referred to may have been deceived by the altered appearance of the place; indigenous grass in this part of the country always denoting dry ground. We have here an example of aberration, in stand back and let them fill it.

an indigenous species, due to local causes.

The second peculiarity in the habits of the Quail will be best described by giving an instance. In a low lying portion of the bush, near to the swamp referred to, one of these birds had made its nest and laid fourteen eggs close to where a tree was felled to be converted into shingles. When the work of conversion commenced the bird was sitting despite the noise of cross cutting and splitting the timber, and the removal of scrub close to her nest. She sat on in full sight of the workers until she brought out her brood.

When suddenly come upon the California Quails escape detection by crouching low, and keeping quiet, until the intruder has passed when they immediately fly off in an opposite direction. From this it seems possible that the sitting bird not being interfered with by the shingle-splitters, acted instinctively on the principle that unattacked was unperceived. The nesting in flooded ground with safer situations close at hand, seems at first sight like a want of sagacity, but probably both this and the other peculiarity might be satisfactorily explained by reference to the original habitat of the species. Being unacquainted with that portion of the world whence the *Ortyx californica* has been imported, I must leave this matter to others better informed than myself, my object being merely to direct attention to the subject.

While these foreign quails are increasing rapidly the indigenous species (*Coturnix Novae Zelandiae*) is fast becoming extinct. From the northern portion of the Middle Island where they were formerly abundant they have now entirely disappeared. Several causes have led to their extinction. First they inhabited the dry grass land, where fires became frequent after the colonization of the country, and secondly, being birds of short and weak flight,

they fell an easy prey to the dogs. Thus it can be seen that the introduction of a new element into the ancient habitat of a species, may be more fatal than the removal of a species to an entirely new environment.

The California Quail belonging to a country where foxes, wolves and other predatory quadrupeds are found, is able to hold its place even against the most destructive of all animals—man.

In places like the Pelorus some undoubtedly perish by floods, but the large broods from fourteen to twenty in number, they annually bring out more than compensate for this loss. From the unusually great number of eggs these birds lay it seems probable that even in their original habitat a large proportion of the eggs or young get destroyed.

JOSHUA RUTLAND,
New Zealand.

Courtesy and Business in Exchanging.

I have often wondered that someone did not write an article on the matter of courtesy between collectors; those engaged in exchanging, and in general correspondence. But as much as there is a need of an article on the subject no one has, it seems, found time to devote an hour to the subject and write about what we need in this line.

Having been a sufferer, myself, for nearly a quarter of a century, as a crank on the subject of eggs, birds, and various other matters pertaining to crankism, it is fair to say that my remarks are at least worthy of consideration.

Boys—and I reason from my knowledge of our interests, that we are nearly all boys—are too apt to think only of themselves in all matters of exchange and selling of specimens. It therefore follows that some, yes, a large number, offer specimens in exchange that they have not in their collections and perhaps never had.

If an exchange (prospective) is considered by letter; then each sends the other a list of eggs. This list is (almost invariably I am sorry to say) stuffed, so to speak, with high priced eggs or skins, which the exchangers do not possess. After the exchange is effected each of the parties to the deal, ten to one, are in the possession of specimens of skins or eggs which are 'out of sight,' in the eyes of their latest possessors, and each feels sure that he has the best of the other.

The next exchange, in which one of these fortunate (?) collectors tries to exchange his specimens to a knowing oölogist, results in a *fiasco*, owing to the fact that the knowing one knows what's what. Then follow letters of reprimand, or that is, in boy's talk, *sass*, and the ultimate result, that both of the last exchangers think the other a swindle, and a snide. I have had this tried on me an hundred times. Every collector knows what it means well enough. And it will be tried again 1,000,000 times among the collectors of the United States in years to come.

Then there are the whiners who are always the ones who complain to the receiver of damaged eggs, that the specimens sent, were in good condition when sent, and who really sent the eggs in a paste-board box. They wonder why the eggs could not go 1,000 miles safely by mail in a paste-board box. They kick and stew until a good collector will send them something to keep them quiet.

Then there is the postal card fiend, who sends postal cards indiscriminately all over the United States and Canada for price lists. Ten to one he has not a cent, and in nine cases out of ten he is a beginner, with everything to gain and nothing to lose—including reputation. He writes to everyone, and wants eggs, skins, shells, insects, corals, reptiles, etc. He has no money and no specimens to exchange, and will write

perhaps six months, twice a week, and never show up a cent, or anything else, but conceit and back talk. No one ever knew him to enclose a stamp for reply, or to do as he agreed. Perhaps he is not at fault, and probably too young to know better—but I advise all sensible collectors to let him alone.

Next follows the young chap who sponges his paper and envelope of his sister or mother, and two to one places the stamp in the left hand corner. It is not best to answer his letters either, unless he encloses a stamp for reply, and then only to say *no*, to his question of exchange.

The boy or girl, man or woman, who shows his or her own independence and therefore individuality as a business person, by writing on proper paper, according to sex and person, and talking on paper like a business person, will command respect. Provided that a stamp is inclosed, an answer is assured. But the boy or man who writes like a baby-boy, and with no more style or individuality than is possessed by little school-girls of ten years, cannot expect to succeed. I have letters that are from boys of twelve or so, which are models of business system. Then again letters come to me from grown men, that are the indicative of the slouch and non-progressive class.

My aim is to stimulate you to improvement and to cause you to attempt a higher plane. In order to do this you must not remain simply oölogist alone. Do not think that you have the world by the coat tails because you have more eggs or species than your chum. Oölogy is only the beginning, or at least one notch above stamp collecting. No one needs to be above it. There is much to learn in it as in all other things but you must not get into the rut of thinking that it is alone, and pre-eminent.

But with oölogy or any other science, there is a good opportunity to inform one's self, and as well be upright among

your fellow men. There are a few rules in your intercourse with birds and men which it will be well to bear in mind, and which I will place here for your guidance, believing that all will agree with me upon reading them over.

1. Identify your specimens fully at the time of capture. Don't call your sparrows eggs swamp sparrows, because you found them on the low land. One-hundred to one they are song sparrows. Never send or receive an egg or anything else without perfect identity. Never buy specimens except from reputable dealers.

2. When you write a letter requiring information, or a list, enclose a stamp. The editor of the OÖLOGIST will tell you that he is out many dollars each year, for postage on account of these delinquencies. Think of your own case if every one should expect you to write.

3. Pack your eggs properly in cotton and enclose in wooden box. Cigar box is good if properly fortified in center with strong fastened partition or properly end lined. Don't send letter by the same box, it is against postal laws.

4. Don't buy from, or exchange with the person who advertises eggs for less than one half what other dealers sell for. You may rest assured that he is a swindler.

5. Don't send out so-called sets of eggs with eggs from different clutches in it. A good collector knows your little game at once and you soon get a name for dishonesty.

6. When you correspond with any collector, in fact any one—make an effort to improve in writing, punctuation, spelling and general make up of letter. And above all be punctual and polite as well as punctilious.

7. Get good style of proper-sized paper and write like a business man. Remember that in my judgment, the

boy or man who writes a neat letter, punctuating properly and filling out his lines fairly, is much more liable to prepare his specimens well, than a person is who scrawls all over his sheet and makes his writing look like fly-tracks in ink.

G. SIRROM.

The Raptore of Omaha and Vicinity.

BY CHARLES ACEY WHITE.

SWALLOW-TAILED KITE, *Elanoides forficatus.* Accidental visitor around Omaha, but more common through the country.

MARSH HAWK, *Circus hudsonius.* The Harrier or Mouse Hawk as more commonly called arrives here the last of March, when pairs may be seen sailing along the ground and chasing each other like children at play.

Nidification begins about the first or second week in May and if not disturbed will resort to the same old site for years.

The nest is situated on the ground near water in tall grass or on a slight hillock in a marsh, composed of coarse grasses, old weeds and sun flower stalks, if growing near. The nest is very loosely constructed and lined with coarse grass.

The eggs are greenish-white, either immaculate or faintly spotted with brown or lilac, rather oval in shape, three to six in number.

SHARP-SHINNED HAWK, *Accipiter relax.* Found breeding here and north of Florence, Neb. It feeds principally on small birds.

The eggs are subject to great variation. The ground color varies from bluish-white to grayish-white, spotted, blotched, speckled and clouded with fawn color, burnt amber, chestnut, chocolate, lavender-gray and dark brown, spherical in form.

COOPER'S HAWK, *Accipiter cooperi.*

The commonest of our Hawks, arrives in the latter part of March. It is a beautiful and daring bird and quite well known to the country people. He is not such a free-booter as some would imagine, although I will admit he loves "chicken". Like the darkey his mouth waters when he hears the cackle of a hen. He also feeds greatly on small birds, squirrels and rabbits. He may often be seen sailing along close to the ground, eagerly looking for his prey. When one is spied he quickens his flight until almost upon it. Then like an arrow he swoops down and bears it away. It is remarkable how one of these birds can sail so swiftly among the heavy timber and never strike against some tree trunk.

One day while out hunting I saw a Cooper's hovering over Florence Lake, and thinking it rather strange concluded to watch him. After twenty minutes had lapsed he slowly began to descend until within ten yards of a patch of rushes. I then arose and fired at him but missed. Just then a Mallard flew up from the spot where he was watching, but Cooper's did not give chase for he concluded to get out of gun range. I firmly believe he was watching the duck.

The nest of Cooper's is generally situated very high up, and composed of small twigs. Crows' nests are often occupied. A pair nested in the same nest two years near Scotland.

Laying commences about the second week in May, sometimes the first. The eggs are of a pale bluish or greenish-white, frequently spotted with pale brownish red. The number in a set is from four to six.

AMERICAN GOSHAWK, *Accipiter arti-capillus*. This large and beautiful hawk is only a winter visitor to our wood.

RED-TAILED HAWK, *Buteo borealis*. The Red-tailed Buzzard is a very common breeder in our woods. Like *Cooperi* it is also a lover of the barn

yard friends, but lacks the nerve of his little cousin. Here they feed principally upon squirrels, gophers, chipmunks and small birds. The remains of the rodents are generally found in the nests.

The nests are situated in very tall trees and composed of sticks, twigs and bark, lined with bark. The only feathers found in the nest are off the breast of the bird.

L. Skow took a very fine set of these eggs, April 7, 1893 near Scotland, Neb., four miles north of Omaha.

KRIDER'S HAWK, *Buteo borealis*. Accidental visitor; very rare. Took a fine specimen near Florence, Neb., three miles north of Omaha.

WESTERN RED-TAIL, *Buteo borealis calurus*. Accidental visitor; have only seen one since 1890.

RED-SHOULDERED HAWK, *Buteo lineatus*. This Hawk is largely distributed over the state and is abundant in winter. A great many call it "Chicken Hawk," but it seldom visits the barn yard. Its food is usually frogs, rats, mice and sometimes small snakes.

The nesting of the Red-shouldered is almost the same as the Red-tail, but here it seems to like small woods. The number of eggs deposited is three or four, sometimes only two. The background is bluish or yellowish-white; sometimes brownish, spotted and blotched irregularly with many shades of reddish-brown. A set in my collection is exceedingly heavily marked with dark brown.

SWAINSON'S HAWK, *Buteo swainsoni*. This beautiful bird may also be classed as a common breeder here. I have never heard of this species visiting the barn yards. They feed principally upon gophers, grasshoppers, mice and large black crickets. The nests of this species are situated in trees, from 30 to 50 feet from the ground. Old nests of Hawks and Crows are also fitted up.

A set of eggs taken April 20, 1891

consisted of two. The background was of a greenish-white tint, spotted, stained and blotched with reddish-brown.

BROAD-WINGED HAWK, *Buteo latissimus*. The Broad-winged Hawk is also a common breeder, but not so common as *B. swainsoni*. A set of two, taken May 15, 1892, answers to the following description: ground color yellowish-white, variously marked with spots, blotches and clouds of umber-brown, chestnut and fawn color. The nest was situated in a high tree, old Crow's.

GOLDEN EAGLE, *Aquila chrysaetos*. Transient visitor. Not common. A pair nested near here in 1884.

BALD EAGLE, *Haliaeetus leucocephalus*. Transient visitor. Rare. Of late years they have become very rare.

PRAIRIE FALCON, *Falco mexicanus*. Winter visitor; not common. Took a fine specimen near Hardwood Lake.

DUCK HAWK, *Falco peregrinus anatum*. Summer visitor; not common. Took two very fine specimens near Florence Lake.

AMERICAN SPARROW HAWK, *Falco sparverius*. This handsome little Falcon is a very common visitor to our woods, but I have never found them breeding here.

AMERICAN OSPREY, *Pandion haliaetus carolinensis*. Visitor; not uncommon. Six specimens were taken last year near Florence, Neb.

BARN OWL, *Strix pratincola*. Visitor; not common. Took seven specimens near East Omaha last year.

AMERICAN LONG-EARED OWL, *Asio wilsonianus*. This bird is a common breeder. Its notes are like the "me-ow" of a cat, but when heard in the distance sound more like "hoo, hoo ow." The nests of this species are generally old Crow's or Hawk's, which they repair with a few sticks. The eggs are from three to six and sometimes seven in number.

SHORT-EARED OWL, *Asio accipitrinus*.

The Marsh or Short-eared Owl, is a common visitor.

BARRED OWL, *Syrnium nebulosum*. This Owl is found among our bottom woods near the river. They commence to breed here in the latter part of February. The nests are in hollows of trees, in old Crow's and Hawk's nests.

The eggs are two or three in number, very rarely four, globular, white.

SCREECH OWL, *Megascops asio*. I have never found a nest here but several collectors say they have taken eggs, so I will call it a summer resident; common.

GREAT HORNED OWL, *Bubo virginianus*. Gem of our Owl visitors, it is known as the "Hooter," Hoot and Cat Owl and is the largest of all Owls with ear tufts. It is a lover of the barn yard inhabitants, as well as rabbits, raccoons, weasles, minks, etc.

They commence to breed in February, and eggs are common until April. *B. virginianus* breeds among our deep woods near the bluffs, also on the bottom lands. Old Red-tail Hawk's nests are usually occupied after being relined. The eggs are two or three in number; white in color; globular in form.

Five eggs in my collection measure 2.15x1.70, 2.18x1.73, 2.31x1.85, 2.28x1.80, 2.29x1.82.

BURROWING OWL, *Speotyto enneacuria hypogaea*. Many of this species are found here but I have never taken their eggs. They breed in the state, but not here.

A Few Hints on Camping.

I know that when I grew large enough to think about going camping, I eagerly sought for any points on that subject. To the initiated, this article will not appear of much interest, but I hope that some of the readers will profit by it.

We will suppose that we are going out in the warm summer months. The

tent should be large enough to accommodate the party comfortably, so that in case of rain, you will not be packed in like sardines, which is often the case.

One word about the place to pitch the tent. We always want to be near a stream of water, but the lowlands are very often unhealthy, so pitch the tent, if possible on a bluff, near a group of medium sized trees. Large ones are very apt to blow down, in case of a heavy wind storm. In digging the trench around the tent, throw the dirt up against the sides, so that you not only have a protection against the rain, but a protection against reptiles.

Each person should be sure to take the following outfit; An empty tick (to be filled after you reach your destination if convenient) or a cot, a camp stool, two blankets, two tin cups, two knives and forks, and two spoons, besides the necessary cooking utensils, there should be a good tight box for the provisions. Of course you are to decide the provisions that you want to take but be sure to take enough grease to fry game with.

The last time that I was out camping I ran out of lard but I happened to have a lot of breakfast bacon with me, so I rendered the lard from it and found that it was a very good substitute.

You will probably want to get bird skins and eggs, so be sure to take the necessary instruments, for there is nothing so aggravating, as to secure a fine specimen and then not be able to save it.

You can hang the hooks from the ridge-pole, and have almost as convenient a place as if you were in your room at home.

Of all things do not touch the top of the tent if it is raining, unless you want to get a ducking. One of the first times that I slept in a tent, was a night when the rain was pouring down and as things were new to me, I could not go

to sleep. Not thinking what I was doing (for I had been warned before hand) I reached up and rubbed the tent, directly over my head. In a minute or two the water commenced to splash in my face and finally I had to get up and move my bed but I had to go to sleep on a water-soaked pillow.

On a pleasant night I prefer to sleep in a hammock, but I think that those who have been camping near a piece of woods, will agree with me when I say that the beginner will find the tent more comfortable, when the owls, especially the screech owls, begin to hoot. I used to think that I never would get used to the shrill cry of the screech owl.

I don't think that you will need a revolver with you. I have camped out several times in the woods, and have never seen the time when I needed one. My collecting gun is the only arm that I ever take with me, except a strong hunting knife, that I use for every thing that you can think of, from cutting off a limb of a tree that has a birds nest on it and skinning game to splitting kindling.

CURTIS WRIGHT JR.
Carthage, Mo.

Short-billed Marsh Wren.

Cistothorus stellaris.

This very peculiar, somewhat rare, and extremely interesting species of the Wren family is an abundant summer resident of North Western Iowa. Its arrival and departure are both little noticed and little known. It must arrive quite early as will be seen by some of the breeding dates which will occur in this sketch. For the same reason it must depart rather late. It is a bird that the casual observer will never distinguish from the common, "sparrow", "grass bird," etc., with which he imagines himself to be acquainted. After ar-

riving (whenever that may be) it makes its home in the grass with which the prairie is covered, and for some reason does not appear to sing much before the hot months, and certainly not before nest building begins. This commences early in June and from that time until late in August and early September one may find the birds busily engaged in the duties of nidification. Only one nest has come under my notice in June. This was found on the 9th, and contained two whole eggs and several broken ones a herd of cattle having run over it. This was certainly an exceptionally early date as I have not been able to find any sign of one that early since.

From July 15th to August 30th is the period of active nesting. At any time during those six weeks one may observe their habits to his hearts content (that is if he is easily contented). One of their most characteristic habits is mounting a weed-stalk and after singing for a few seconds suddenly disappearing in the grass at the foot of it. From there it may again mount the stalk and sing its pleasant song or it may emerge from the grass several feet from where it entered and fly to another weed. Its notes are uttered on the wing, also. Always when setting, it utters several warning notes before commencing its real song. Though it is some time yet before I can hope to see the dear little fellow again, it seems almost as though I can see him mount a "gunweed," cock his little tail, utter the warning notes and sing his song, which conveys the idea as plainly as words, "Find my nest if you can." "All right my fine fellow we will try." So we will watch him. He flies a short distance alights and soon disappears in the grass. Not seeing him for some time we think he has gone to his nest. So watching carefully we approach the place where he disappeared. "Ah! there he goes, now let us look for the

nest." But though we search carefully we cannot find it and we see he has fooled us, so we will try another plan. Going where the grass grows thickest, in some spot where there is a depression in the ground which has held water longer than the rest, or near the waters edge of some pond, we begin the search. We must part the grass in all directions for the nest will be carefully concealed and placed below the tops. After considerable time (having started in the right place) we find a nest. The first we see is that the tops of a bunch of grass blades all curl towards the center. Looking closer we see that they hide the nest, which is the shape of a cocoanut, and composed of dry grass. We nervously feel for the little round hole in the side, just like the one in a mouse nest, and eagerly insert a finger. Hurrah! Eggs! Well we are very fortunate. There are six little pearly-white beauties, and fresh. We feel much encouraged now and again begin to hunt. Before long we find another nest. But ah! there are no eggs. The nest is not lined nicely with feathers as the first one was but is composed entirely of grass, and very loosely made. Our ardor is somewhat damped but we continue the search. We find several nests but no more with eggs, so we see that we were very fortunate the first time. We have hunted all the afternoon and now we go home and prepare the eggs we have found. While we were searching Mr. Wren did not appear to act any different than when we were out of sight of him.

I have rarely caught the bird in the act of nest building. Only once, I think, then the nest turned out to be one of those which are not used for eggs. What is the birds object in building the extra nests can never be definitely known. It is a characteristic of the Wren family. The Long-billed Marsh Wren builds fully as many extra nests

as this species. And the House Wren will make a nest in each of several boxes, if one will put them up, and only lay in one. This is the greatest peculiarity.

The Short bill sings in the night and is the only bird I have ever heard do so in Buena Vista Co. This makes it an especial favorite with me, and on the whole I think it is much the most interesting species I know. It seems to me I could write several hours yet and tell something new on each page, but if I do, it will take a whole OÖLOGIST to contain the article so I will "cork up," hoping to hear more of this bird through the OÖLOGIST.

POOCAETES,
Indianola, Iowa.

The Prairie Horned Lark.

Otocoris alpestris praticola.

During the winter months when the snow covers field and woodland; when the streams are hidden from view by the Frost King's icy coating, and the cold wind is driving the snow in clouds over fences, and through thickets where in summer time the lively trill of numberless feathered songsters greets the ear, how eagerly we listen as from across the snowy waste we catch the pleasing though broken whistle of the Prairie Horned Larks, as, in flocks of from a half dozen to twenty or more, they wing their undulating flight, or pause to rest for a short time on the earth's white mantle, picking what few stray seeds the wind has left on the weed-stalks projecting above the snow.

Otocoris alpestris praticola.—part of whose common name is derived from the tufts of black feathers over each ear resembling horns which it has the power of erecting at will, is quite common in this part of the state nearly the entire year.

I have noted the bird every month in

the year except two, and one of our best authorities has observed it every month in the year. Hence, from these observations I conclude that *praticola* is without doubt a *resident* here.

The Prairie Horned Lark is most frequently found in meadows, pastures, or newly plowed fields, usually breeding in either of the first two mentioned, and repairing to the last after the young are old enough to fly, the whole family following along after the harrow, similar to the Blackbird.

Seldom, if ever does this bird perch in trees. Its favorite resting place when not on the ground, is a stone wall or fence, from which elevation with "horns" erect, it will carry on quite an animated avian conversation with a companion standing perhaps, on a large stone a little distance off in the field below.

The song of this lark when heard in summer, is quite plain and commonplace compared with the bubbling ballad of the Bobolink, the soft warble of the Bluebird, or the exuberant whistle of the Baltimore Oriole; but when the cold days of early autumn and winter approach, and all these gayer minstrels leave us, then it is, that its cheery *tseep, tseep,* is most thoroughly appreciated.

Very aptly has Langille expressed the song in these words: "*Quit, quit, quit, you silly rig and get away,*" the first three syllables uttered slowly, and the others more hurriedly run together.

A noticeable characteristic of this bird is its graceful walk; its equilibrium being maintained by an easy nodding motion of the head.

Although in the west this Lark is said to rear three broods of young in a season, only two broods in a season are raised in this locality. The first during March, or early in April, the last about the first of June.

The writer has found four nests of this species, three of them in the same field—an old pasture—within a few

rods of each other, the fourth in a meadow quite a distance from the first three.

Perhaps a description of these "finds" might be of interest.

Set No. 1, was taken in June 1888, and contained five fresh eggs. Ground color, light greenish, uniformly mottled over the entire surface with light chocolate brown. Average measurements .84 x .60. The nest was a hollow in the ground, lined with fine grass.

Set No. 2, found March 19, 1890, contained two eggs and as no more were laid, the two were taken March 24th. The ground was covered with snow at the time, to a depth of three inches. The parent bird sat close and allowed the writer to walk in a circle around her till within six feet of the nest, before rising. One of the eggs was marked similar to those in set No. 1, but darker, the other was wholly different in coloration, having the marking collected in a dark greenish-brown wreath around the larger end, leaving the grayish white back ground clear at both extremities of the egg. The specimens measure .84 x .65, and .84 x .63 respectively. The nest was a hollow in a bunch of sod, lined with dried grass, and contained a few tufts of thistle-down.

Set No. 3, taken March 31, 1891 numbered four fresh eggs nearly uniform in size and coloring. Each has the markings arranged in a confluent circle of dark sage-green around the larger end, the remainder of the egg being sparsely sprinkled with brownish drab. The specimens in this set are unusually elongated, as the following measurements will show: 1 x .62, .94 x .62, .94 x .63 and .94 x .62. The nest was compactly built of dried grass stems, and rootlets, lined on the bottom with thistle-down, the rim of the nest rising two inches above the ground.

Nest No. 4, was found while rolling a meadow April 15, 1892. It was com-

posed of dried grass and was lined with —five young birds just in the down. I should have been much better pleased to have found five eggs, but the old bird had the "drop" on me this time, so I turned out and left the downy olive branches unmolested.

I came upon all of these nests accidentally. I don't know how it is with other collectors but it is almost invariably "just my luck," never to find a nest when I am looking for it.

"STRAGGLER"
Medina, N. Y.

Plumage.

Among the many subjects discussed through the columns of the OÖLOGIST, wide and varied as has been the range, I have never yet seen reference to the construction and characteristics of plumage as a whole, regardless of species. One contributor has remarked—"Let us first study bones and muscles and then feathers." To the anatomist this certainly is logic, but from an ornithological stand point the plumage appears to demand priority. Reader did you ever stop to consider the combination of beauty lightness, and strength displayed by a feather, not necessarily the gem from the ruby gorget of a Hummer, not the plume worth its weight in gold from the wings of the mammoth among birds, but an ordinary secondary, from the wing of, possibly, the most homely, or perhaps more properly, the least beautiful of all the birds.

First we have the quill, which is a semi-transparent horny tube, containing in its cavity a series of tissue capsules, united by a central pedicle. At its lower extremity is the orifice, through which the feather draws its sustaining fluids from the body.

A continuation of the quill is the shaft, convex on the back, and presenting a longitudinal groove beneath. A

feather, you will have noticed, bends easily in the direction of the web, but on attempting to bend it backwards or forwards we find it is quite rigid. Upon the examination of a cross section of the shaft, beneath a microscope, the reason is at-once apparent. The shaft like the quill is a horny sheath or tube, thick and hard upon its front and back faces, but comparatively thin upon the sides, from which springs the web. This sheath is filled with myriads of pithy cells, very much resembling honeycomb, but so small as to be invisible to the naked eye.

The web of the feather is composed of a number of elastic strips, arranged in a single series on each side of the shaft, and inclined toward it. These strips, or barbs as they are commonly called, are mere prolongations of the outer coating of the shaft, and are somewhat wider at the base than at their extremity.

From the sides of the barbs, and in the same manner as they arise from the shaft, there spring immense numbers of small filaments known as barbules. Again calling our microscope into requisition, we find that these barbules consist of a thin, semi-transparent blade, along one edge of which there runs a heavy rib, the whole presenting a striking resemblance to a scythe blade. The main difference being, that in the barbules the rib extends some distance beyond the blade, and is fitted at its free extremity with a number of hooked spines, arranged in a series much like the teeth in a comb. The use of these hooks will appear presently. Place two feathers side by side so that their webs overlap slightly, and you will notice that their barbs cross at almost a right angle. In the same manner the barbs being side by side upon the shaft, the barbules springing from the right hand side of the first barb overlap, at right angles, the barbules springing from the left hand side of the second

barb, in the same manner as those springing from the right hand side of the second barb, overlap those on the left of the third, and so on till the tip of the feather is reached. The before mentioned series of hooks upon the overlapping barbules, interlocking so firmly, that a close and compact surface is formed.

The wing and tail feathers are of this description, while those covering the body are usually somewhat different. The quill, shaft and barbs, are more soft and elastic, the barbules become round and thread-like, and there is scarcely any appearance of hooks. But feathers may be found upon almost any bird, ranging anywhere between this and the first mentioned.

Another feature of the body feathers on many birds, is the pecten or accessory-plume. This is a collection of loose wavy barbs, ranged about the junction of the quill and shaft. It varies much in size upon different species, and even upon different parts of the same bird, and is not found upon either wing or tail feathers. Upon this accessory-plume, as well as the elasticity and lightness of the shaft and barbs, depends very much the value of bed feathers.

Some birds more especially aquatic species, having no accessory plume, are furnished with a downy covering beneath their ordinary plumage. This covering is composed of very small tubes lying in the skin, from the interior of which there arises a tuft of filaments, forming a warm coat without appreciable weight.

Feathers possess a few other gradations in structure which are unique and curious. The Cassoway, instead of ordinary plumage, is furnished with a number of cylindrical tubes, which are merely quill and shaft, entirely destitute of barbs. The Bohemian Waxwing and our common Cedar Bird, bear at the ends of their secondaries, horny

expansions, resembling red sealing wax, while the wild turkey bears on its breast a tuft, which certainly resembles hair more than feathers.

F. BARKER.

Canadian Birds.

As very few readers of the OÖLOGIST reside in this vicinity, I may perhaps add a few notes on some of the birds that are found here. Not that I hunt them, or study them in their haunts, but go in an unsportsmanlike manner, to Montreal's great produce and game stronghold, the Bonsecours Market. Here it is, and for years past that the fowl, game and agricultural products have been vended.

It is worth a fortune, on some afternoon, to find your way slowly and tortuously, between innumerable carts and even more plentiful natives, to study nature here exhibited, and the numerous discussions arising about goods connected with their bandy carts.

But to return. Birds of several kinds are shot (and snared) in this vicinity and invariably find their way to the market place.

It is also an understood affair that about double the wanted price is to be asked. I suffered at first for want of this knowledge. An example. Carefully looking to see what was hung up I espied a fine specimen of that noble bird, the Pileated Woodpecker. Almost turning my nose at the bird, I asked its name? "Don't know, some sort of crow!" What's the price. Well give me .75 and have him. I bought that woodpecker for .25, and four specimens to my knowledge have been there since.

Great numbers of the Duck tribe are represented, such as our beautiful Wood Duck, the shapely Mallard, Blue and Green-wing Teal, Golden-eye, dainty Buffle-head, Blue-bill, Black Mallard, Shoveller, two species of Mer-

ganser's, Horned Grebe, and Canada Goose! That grand bird, the Great Horned Owl is quite plentiful. Barred Owl's are quite common, also the Long and Short-eared Owl's can be had now and then. Fine specimens of the Snowy Owl's from this vicinity have been exposed for sale. Most of our Northern Raptore are found in this locality, especially that bold bird the American Goshawk. The Black Rough-legged Hawk has also been very common. The Osprey is not rare. Several species of Sea Gull's fly up the St. Lawrence in the fall, and numbers are shot. The Loon is shot on or near Lakes and aud are hung up for sale.

As for mammals, the beaver, raccoon, fox, several species of squirrel's and muskrat (dressed) are common enough, the beaver comes in but rarely. Several species of Snipes and Plovers are very abundant. Of these Wilson's Snipe, Golden Plover, Killdeer and the Woodcock are very plentiful, also Yellowleg's and stray Sandpipers. The Canada Grouse are always on hand and cheap, and thousands of our Ruffed Grouse, packed in barrels, and killed, it seems to me more by strangulation than shooting. It is in part, the humanity met there, that interests one, as going through their midst with 'Owl' or 'Duck' in view, an old woman accosts you (French), giving you information on pork, onions, blood-sausage etc; or see the seething multitude, buying, bargaining selling, and in all this your humble servant jostled, hurried forward until arriving at the coveted place, some fine birds await you.

The above is, I know, a very unscientific rambling, but it perhaps agrees with the relations attending the procura of the specimens, and gives an idea of some of the birds that, with few exceptions, are taken in this vicinity.

Respectfully yours,

ALBERT U. ROBERTS.

Montreal, Canada.

**SCENES FROM THE LIFE OF ALEXANDER
WILSON.****His Early American Career.**

G. VROOMAN SMITH.

II.

With chill Penury staring him in the face, Wilson seized his meagre personal belongings and stepped ashore at New Castle, Delaware, July 14, 1794. No anxious expectant faces greeted him on his arrival. No acquaintance had he in the whole New World to welcome him to the Land of Freedom. No one to aid in diminishing the feeling of solitude which attends one's arrival in a foreign land, save his nephew, William Duncan, and even he immediately set out for New York, a distance of four hundred miles, to settle on a farm.

When he arrived he had only one shilling in his pocket and that borrowed from Duncan. He had no letters of introduction and not even a decided object in view. His old sedentary employment of weaver and peddler were the only means whereby he could earn a livelihood.

But Wilson was not entirely destitute. He felt himself transplanted from a land enslaved by tyranny and the aristocracy of wealth to a land of freedom. He hailed with delight his arrival in this country as the first step towards a new and brighter existence.

With a strong determination to gain an honest subsistence he shouldered his gun and set out on foot for Philadelphia, a distance of about thirty miles. While journeying through the forests of the Delaware he became impressed with the multitude of strange birds he saw. He shot one—a Red-headed Woodpecker—which he pronounced the most beautiful thing of its kind he ever saw. Its peculiar habit of rapping on the dead branches; its beautiful scarlet head contrasted with the rich glossy

black of its back did not fail to arouse in Wilson an admiration for the feathered inhabitants of our woods and fields. This little incident occurring as it did when he was exulting in his release from an oppressed country and when he was open for a new employment seemed ominous of his future pursuits in the New World.

Friendless and weary he at last arrived in Philadelphia. Refreshed by a brief and much needed rest he turned his attention to seek an employment whereby he could honestly earn a living. But for a stranger like Wilson, separated as he was from all acquaintances and kinsmen by two thousand miles of water, to find immediate employment without a recommendation was no easy task. Employers were reluctant to hire workmen about whom they knew absolutely nothing. Finally the honest face of Wilson served him a good turn. A copper plate printer of Philadelphia was struck by the frank, manly nature of Wilson and gave him employment in his own business. This he soon relinquished as not being exactly adapted to his tastes, and again took up his trade of weaving at Pennypack Creek, about ten miles from Philadelphia. His employer, Mr. Sullivan, became closely attached to Wilson and served him many a timely assistance in after life when he was struggling to overcome the difficulties which beset every step of his progress in the achievement of his great undertaking. Not long after he removed to Virginia as a settler. Ill success attended his sojourn here and he returned to Pennypack Creek in the old capacity of a weaver.

In the summer of 1795 we again behold him shouldering his old companion, the pack, and trudging along through New Jersey exhibiting the contents with some success. The journal he kept during this tour is profoundly interesting as it contains minute descriptions of the manners and customs

of the inhabitants he met with and also shows that he was much concerned in the natural objects he encountered and especially the birds. The taste which afterwards made his name immortal was gradually being formed, yet the circumstances which hastened the inspiration were soon to follow. From peddler and weaver he became teacher of a country school near Frankford, Pa. From Frankford he removed to Milestown and remained there as teacher for a number of years, at the same time surveying for the inhabitants dwelling in the vicinity, and thus increasing his small income. No occupation he might engage in could be of more value to him in view of his future study. Formerly he was deficient in language and education. Now by hard study and application he was rapidly overcoming these faults. He applied himself closely to his work, acquiring a broad sphere of knowledge and gaining more distinction in mathematics. While the occupation of school master was not as exalting as it might be still he manifested no displeasure towards his new line of work. The income from his school was small, but he willingly shared it with his nephew, William Duncan, who was striving to carve a home out of the stubborn wilderness of Seneca county, New York. Wilson himself had an interest in this farm, it being purchased by a loan from his old friend and former employer, John A. Sullivan. Many are the letters that he wrote to his nephew encouraging him to bear up with firmness under his difficulties. He tells them to put up with the rough fare and rough clothing of the country. "Let us only get the place into good order and you shall be no loser by it." How he affectionately encourages them, when his own position at the time is far from being the most pleasant in the world. While stationed at Milestown he undertook a journey of eight hundred miles

through almost an unsettled country to visit his friend. He returned after an absence of only twenty-eight days, having journeyed entirely on foot.

From Milestown he removed to Bloomfield, New Jersey, where he taught a village school. Soon after he applied for the position and his services were accepted as teacher of Union School, in the township of Kingsessing, not far from Gray's Ferry on the Schuylkill river.

We shall hereafter speak of Wilson as an Ornithologist, because it was at this time and upon the banks of this beautiful stream that he received his first definite Ornithological inspirations. It is a peculiar and striking coincidence that both he and Audubon were first inspired by the beauties of the feathered inhabitants upon the banks of the same stream. Both have handed down to posterity names that are colossal monuments in their chosen science.

It was here that Wilson made the acquaintance of the famous botanist, William Bartram. Their acquaintance ripened into a warm friendship. A friendship that the cold hand of Death alone could dissolve; and alas that was destined to happen too untimely. Under the immediate tutorage of Wm. Bartram, Wilson gradually saw the curtains drawn away from the face of nature and the obscurities therein minutely revealed.

Among the Snake Birds.

BY PERICLES.

A winter in Florida is among the pleasantest memories of my life, and the adventures of the season in that sunny quarter, form bright pictures that are frequently brought to my mind's eye. Of all the birds that were met with on the trip, there were few which impressed me with their manners and peculiarities, as did the Water

Turkey Anhinga anhinga. This species, so far as I could learn, is common throughout the state; both in the neighborhood of salt water, as well as in the interior. I met with it from the northern part of the state, to Lake Worth in the south, and at the edge of the everglades east of Lake Okechobee.

This bird, often called Snake-bird, from the resemblance which its head and long neck bears to a snake, is a pre-eminently aquatic species, and is rarely, if ever taken at any great distance from stream or lagoon. It is found on the Atlantic sea-board, but I do not know how far to the north, and also throughout the border of the gulf, and in many quarters well inland on fresh water, in suitable localities. Occasionally it straggles as far as the Ohio river by way of the Mississippi, and has even been recorded from Indiana.

Water Turkeys lay their eggs in April, preferably, but many eggs are to be taken in March and I have seen nests occupied in February. Like many other southern species, the Snake Bird is quite erratic in its choice of time of nest building and egg laying, and I am told that it is not unusual to find fresh eggs in June.

One agreeable March day (in Florida March is fine) with the thermometer at 90 degrees, we sallied forth for Snake-bird's eggs. It would have been altogether too warm for a collector at the north to go prospecting, but in the south one gets used to the warm weather, even in the middle of winter; moreover there was a delightful breeze which was charming in its stimulating freshness. Our yacht

"walked the water like a thing of life,"

and we four were quickly hustled over ten miles of our course. During our cruise two trolling lines were kept out, with the result that a couple of crevasses of three and six pounds were hauled over the gunwale, and a four pounder

channel bass was taken in out of the wet. Coming to a little side lagoon we sheered off of the main channel, and ran into this by-path, as we would call it in the woods.

All about us were the almost impenetrables *mangroves lining the shores, while behind them on a little higher ground were palmettos, here called cabbage trees; and live oaks. Coarse grass and rank vegetation, of, to me unknown species, filled in the spaces, while in many spots were thick clumps of that singular procumbent tree-shrub, the saw-palmetto. These, altogether, give an appearance of wild grandeur which was most pleasing to behold, while there was a charm in thinking what those recesses might conceal. To a northern tenderfoot, of course there was the prospect of big and poisonous snakes, and alligators of terrific size. In fact there was one of the non-adventurous kind in our party; one who could not be induced to go in a jungle from fear of snakes†. Nevertheless there is no danger, or at least no more than from poisonous snakes at the north. Children are about barefooted in the dense jungle-like places, and new clear-

* These small trees rise by a series of elevated roots from the edge of the water: the beginning or butt of the trunk being from two to six feet above water or land. Another peculiar feature is seen in the branches which in many instances grow downward and apparently take root again. All making an almost impenetrable barrier and presenting a most singular appearance.

† I met one plume hunter who was badly bitten by a water moccasin, *torcophis*, and he fully explained his plight, and treatment to me. He was an Afro-American and at the time he was bitten was thirty miles from a settlement. The snake struck him when he was out in the Heron and Egret plume region. He first sucked the wound, which was on his foot, just above the toes, and then bound the leg above the ankle and again above the knee. Next he scarified the foot all about the wound with a sharp knife, afterwards placing a handful of gunpowder on the foot and ignited it. Making for the settlement, he had to rest frequently, and had to remove the bandages as they hurt so that he said he would rather die. After making the distance he was sick two weeks and a portion of the upper part of the foot sloughed off. This man undoubtedly saved his life by his heroic treatment.

ings and one rarely bears of accidents.[†]

Soon we spied a nest of the kind which we were in quest, and by urging, our major domo, George Washington Monroe, was prevailed upon to climb the tree. The nest contained four eggs which were fresh. It was all of ten feet up in the mangrove and on a limb hanging over the water. The feat of climbing was accomplished only by the aid of much boosting and ample praise bestowed on George Washington Monroe and when he returned to the boat with the set—an ovation was held. We jollied up the poor colored boy until he puffed with pride, and began to bluster that he could "climb any tree in Florida." But the very next nest, twelve feet from the surface, was a poser for George Washington and we had to give up in despair. He tried as hard as it was possible for an imp of darkness to try, but at last slid down, without even a grin on his face. We offered him a jack knife, a silver quarter, a rabbits foot*; and we told him we would Hoo-doo him for all summer unless he took the eggs. His reply was: "No use talkin Boss—dshyar n'ggab kyant clim dat ar tree! Too high Boss! No use talkin—nohow! I aint agwine to run no chances to git my neck broke, an lev my pore ole mammy wid no George Washington to take car ob her."

Here was a pretty fix. I'm lame and and could not climb a peach tree. One man weighing over two hundred and fifty was out of the question. Another

one afraid of snakes, and this colored boy without enough nerve to climb up a small tree, you might say, with special steps all the way up.

So of course we left that nest. The next two nests contained no eggs and the following three were only from two to seven feet up. They contained two, three and four eggs respectively. The nests are quite bulky structures and somewhat like the smaller Heron's platform nests. The eggs can generally be seen in or on the nest when one's eyes are still below a level with the margin. The color was a bluish white and the shell is more or less covered with chalky deposit. One egg in a set that we took was entirely different from the rest, being of a light chocolate color.

The Water Turkey is generally a very shy bird and it is only by chance that a collector gets a good view of one close at hand. The birds usually leave the nest before the collector is anywhere near it and this is done so quickly that the act is rarely noticed. However if one is able to steal up unobserved, the rattled condition of the setter may be noted with amusement. The bird in its hurry to escape, not rarely dashes against limbs, and snags, and seems to strike everything near it. I do not think that I have ever seen as rattled a bird as one that I beheld on Indian River. Our steamer was going through the narrows, when a Snake-bird or Anhinga came towards us. Seeing our boat it settled in the water, making no attempt to fly back as it had come. It dove and swam quite a distance, and came up with its head and neck exposed alone, a common and singular practice of the species. Before it could recover itself, the steamer passed over it. In due time, it was seen to rise, after the steamer had passed, and fly away, perhaps to gossip about its latest experience.

[†] One is quite apt to to think, from stories that are heard, that poisonous snakes are to be found everywhere in Florida, and that alligators, scorpions, huge sharks and wild Seminoles are to be seen on everyhand. The fact is, most of the sharks are under five feet in length, alligators are mostly found stuffed in curiosity stores, while the snakes, scorpions and Indians know enough to keep hidden generally.

* The negroes of the South are very superstitious. One of their chief mascots to bring good luck and avert disaster is the foot of a rabbit shot by the light of a new moon.

[†] If one spoke to Geo. W. M. about colored people, he'd reply: "Yo's mistooken Boss. Dey aint culled. Dey's born'd dat way Boss."

To return to our collecting trip: We finally found a nest with the bird on, a rather unusual occurrence in the day time, in the south, where the eggs are often left to the sun's care. This bird dove near the boat, and we watched her with interest, in her manoeuvres to elude and deceive us. She would dive and emerge; sometimes coming entirely above the surface, but generally showing the head and four to eight inches of the long, slim neck alone. To persons inclined to credulity, I can believe that it would be an easy matter to convince them that the creature was a sea serpent, or, at least a water snake. The Water Turkey can swim in this position for an indefinite time. Keeping the body entirely below the surface, it presents a striking feature of adaptability to the requirements of the times. I could not help but compare it to our war monitors, which only give evidence of their presence by the upper parts, while the main bulk of the craft is concealed below water line, and comparatively out of danger. The bird is a good diver but cannot compare to the *hades plunger* revised edition, or hell-diver, old style. In a few minutes a good opportunity presenting, an ounce of No. twelves turned Mrs.* Anhinga's toes up, and we secured her and moved on.

At last we came to a straggling herony, comprising at least two species of Herons. Plenty of Louisiana and Little Blue Herons and an occasional White Heron *Ardea egretta*, now often called American Egret, were seen, but I cannot attest that the last was breeding. It was impossible to distinguish the owners of the nests in a general herony of this kind, and we made no attempt.[†] The nests were mainly built from six to ten feet up, and often in the tops of black mangroves, but quite commonly in other species of low trees and shrubs. Many of the nests contained young and these callow creatures

could be seen stretching up their skinny necks as we passed, making quite a clatter in their demands for food.

We had already visited several heronies and taken eggs of different species, and had all that we desired—so we left the spot and continued our search for Anhinga nests. One nest was found all of thirty feet from the ground while several were seen at a foot to three feet up.

George Washington failed to see the high nest when it was pointed out, but easily spotted the nests which were built on the low bushes. He quickly waded in for them, but was nearly scared to death when he beheld a harmless water snake, which we assured him was the deadly moeaslin. The way he tore for the boat was a caution. The water boiled, the mud flew, and we laughed. The eyes on that coon stuck out like lobster's eyes—and we could not get him to leave the boat again on any pretext whatever.

It was getting too warm for comfort in the quiet lagoon, and so we concluded to get out on the river and take a sail. Finally the yacht picked her way through the tortuous passage—by the combined efforts of all on board. We continued our sailing and trolling for the rest of the day, landing a fine string of fish and having an excellent time. At supper time we drew up to the wharf, and if our appetites did not surprise the landlord, it was because he had seen the same performance nearly every day for over a month.

Perhaps my readers will wonder why I did not confine my entire time to col-

* This specimen has gone to the Columbian Exhibition at Chicago, along with a lot of other specimens, in all twenty-seven species of fish-eating birds from my collection.

[†] I feel confident from what I have seen in this connection, that there is a great deal of misrepresentation by collectors who gather eggs for the profit there is in it. One should only buy of, and exchange with reliable dealers; otherwise one is pretty sure to get fooled, intentionally or by ignorant yet well meaning persons.

lecting. The reasons are various. First, companionship was agreeable, fishing excellent, and then too—its awfully lazy weather down South. Nevertheless my note-book and pencil were in constant use. Moreover my companions had as much right to the yacht as I, and were very kind to assist me as they did. So we generally went in a squad. One day on the beach. Next fishing. Then after Dueks, and Heron's plumes, and so on. Our time was all taken up. We were always hungry and happy, and slept well. One day we seoured thirty-one Water Turkey's eggs and on another occasion seventeen.

MARCH CONTEST.

One Hundred and Forty-one Judges.

Prize winners and credits received by each were as follows:—

1. The Herons of Michigan. 661.
2. Chat and Cliff Swallow. 306.
3. The Barred Owl. 292.
4. The Great Horned Owl in Iowa. 199.
5. Another Day with the Birds of Southern California. 197.

Hints on Skinning and Mounting Birds, receiving 171 credits, was awarded a duplicate of the fifth prize.

The following articles were each awarded one year's subscription to the OÖLOGIST:

The American Bittern. 119.

How to Prepare a Bird Skin. 76.

The list of Judges this month was the largest on record and by glancing back we find that our contests are constantly growing in favor.

Although the list of Judges was larger than ever before still *only one* named the articles in their correct order.

The Judges' prizes were awarded as follows:

1. No. 58—M. V. Stewar, Saxon, Henry Co., Ills.

2. No. 69—George Miller, York, Penna. 1, 2, 3, 5, 4.

3. No. 107—C. Barlow, Santa Clara, Calif. 1, 3, 2, 5, 4.

4. No. 110—Ellis F. Hadley, Dayton, Oregon. 1, 2, 4, 3, 5.

5. No. 3—Wait C. Johnson, Centre Rutland, Vt. 1, 2, 5, 4, 3.

The following were each awarded a copy of the World's Fair Almanac:

- No. 2. Ed. Doolittle, O.

9. E. D Sanderson, Mich.

34. Benj. Hoag, N. Y.

52. B. S. Bowdish, N. Y.

55. Clifton Howe, Vt.

70. Fred A. Gregory, Ills.

78. Thos. A. Smithwick, N. Car.

79. R. S. Loudon, Mich.

84. W. E. Bradford, Ky.

93. Dana C. Gillett, N. Y.

103. H. C. Day, O.

106. Brace & Hunter, Minn.

All prizes were mailed April 10th.

May 3, 1892 as I was standing in swampy bush lot listening to the song of a Goldfinch a Wilsons Thrush came running along on the ground and as I was very still it came quite close, just then a Black-cap Chickadee lit close by the thrush, the thrush didn't seem to like it for he flew at the chickadee and it flew to a bush in front of me and looked up in my face. It was directly in front of me and within one foot of my hand. I thought it would fly away but no, it was not through with me yet. It lit on my shoulder and then on the rim of my hat and walked around it stopping to pick at the band and then flew away. All this time I was standing very still and I don't know whether it thought I was a stub of a tree or merely wanted to get acquainted. Has any one had a similar experience?

VERDI BURTH,
Branchport, N. Y.

THE OÖLOGIST,

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers
ALBION, N. Y.

FRANK H. LATTIN,
WALTER F. WEBB,
Editors.

Correspondence and Items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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* * Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

TO MY FRIENDS AND PATRONS:—Mr. Walter F. Webb of Geneva, N. Y. has purchased one-half interest in my Natural History Business, which includes the OÖLOGIST. Our business will be conducted in the future under the firm name of F. H. Lattin and Co. and from Albion, N. Y. Our Chautauqua stores will be open from June 15th to Sept. 15th. We shall have an exhibit cover-

ing 2000 sq. ft. at the World's Columbian Exposition, and after June 1st we shall have a store conveniently located in Chicago. Street address will be given in June OÖLOGIST or by letter after May 20th. Our Mr. Mathes who has been in my employ for the past four years will have charge of the Chicago store. Mr. Webb will hustle the mail business from my old stand at Albion. Our Chautauqua stores will be in charge of competent assistants, who have been with me for years, and "Lattin" will endeavor to keep the run of everything and now expects to divide the bulk of his time between the Exhibit and the Chicago Store where he expects to meet *every one* of the two-thousand subscribers of the OÖLOGIST. If during '93 you cannot call on either "Lattin" or "Webb" try and make it a point to visit either our Headquarters, our Stores or last but not least our Exhibit.

As ever faithfully yours

FRANK H. LATTIN

W. E. Pratt of Chicago, writes of collecting sets of Blackbird, Yellow-billed Cuckoo, Towhee, Field Sparrow, Red-eyed Vireo, Screech Owl and mentions a number of other species nesting, where the mammoth buildings of the World's Fair, now stand.

John Larsen, of Chicago, writes that he can vouch for the croaking of the Least Bittern, as mentioned in his article in Feb. OÖLOGIST. It might be interesting to have the actual observance of other collectors on this subject.

E. J., of Council Bluffs, Ia., desires to express his opinion that collectors should be more careful in preparing eggs. He states a great many of his correspondents, have sent him eggs recently, that were neither properly drilled nor thoroughly blown.

Mr. Edward Heller of Riverside, Cal., states in answer to Mr. Grinnells query, that he has shot several specimens of the Virginia Rail near his city the past winter and that they are not an uncommon resident, he has observed them in Tule Swamps in June but has not succeeded in yet taking their eggs.

Dr. Prill, of Oregon, writes under date of March 30th that the birds are mating and looking for nesting sites, and that the Warblers are arriving daily.

A. W. B., Cedar Rapids, Iowa, writes of taking a large set of the Downy Woodpecker. The nest when first found contained four eggs, he took three and left one, returning a few days later he found three more eggs.

E. C. D., Gainesville, Texas, gives a valuable way to dry eggs. After the specimen is blown, and thoroughly rinsed, hold it over a stove, lighted match, or blaze with hole down, and the hot air will very quickly remove all surplus water and render the egg perfectly dry. He states that the transformation will be a genuine surprise to collectors who have not tried it.

We have received a number of criticisms to the article, "A Criticism" in April OÖLOGIST. Two or three subscribers, call the writer to question relative to the breeding range of the Barn Owl, claiming it *does* breed in Indiana, but we regret that they failed to give positive proof or cite reliable authority to corroborate their statements. Several correspondents, also state positively that they have observed and identified Wood Thrushes, singing from the tops of forest trees.

We are greatly indebted to Mr. H. Nehrling, of Milwaukee, Wis., member of the A. O. U. for No's of VI, VII, and VIII of his handsome work "North American Birds." The descriptions are not what would be termed strictly sci-

tific yet they are thoroughly accurate, and very pleasant reading for all. No. VII, besides containing many descriptions of birds, gives some attention to "Migration," "Utility of our Birds," "Birds of Beauty," "Birds of Song," "Bird Enemies," "Bird Legislation," and various other topics. The plates through the parts thus issued, are models of Lithographic art, and the general make up of each number, is of the highest order. It has been decided to make two volumes of the work, and number VIII just issued, completes volume I. We would advise all parties interested to send for prospectus or \$1.00 for a sample number to his publisher Mr. Geo. Brumder, 288 West Water Street, Milwaukee, Wis.

"ANOTHER SCHEME," on page 90 of the March OÖLOGIST, was doubtless read by most of the OÖLOGIST's readers. Since the publishing of this article, we have been more firmly convinced than ever that if the "Scheme" was properly carried out, it could be made of great interest. Having received so many answers from the notice and having thousands of eggs from hundreds of Oöologists offered for the exhibit, we have decided to place the Oölogical Section of our exhibit in the hands of the readers of the OÖLOGIST. Our exhibit will occupy 2,000 square feet, in the S. E. Corner of the Ethnological Building—the building assigned for all Natural History exhibits—and will be devoted almost exclusively to Oölogy, Ornithology, Conehology, and to the Instruments, Supplies and Publications required by the Naturalist. We hope to make the exhibit of much interest and well worth visiting. The Oölogical portion of the exhibit shall have preference over all others, and we expect it will occupy about one-third of our entire space. If, however, the Oöologists of America see fit to use every inch of the 2,000 square feet allotted for our exhibit, we shall be only to glad to

At date of going to press, the Ethnological Building is unfinished and on this account we shall be unable to install our exhibit until May 15th, and we would not be much surprised if it was pretty close to June 1st, before we had everything "ship-shape." In our exchange columns we give a list of A. O. U. numbers, showing the sets of species which we have already accepted for the exhibit. Our own stock of eggs is so extensive that we can readily fill up many gaps and put up a magnificent collection but as we are hearing from subscribers daily, wishing to add something of their collecting or from their collections, we have concluded to hold the offer open until May 20th for the benefit of those who have not already added their "mite" to the "scheme". If you have any fine sets not now represented, and you wish to have them exhibited at Chicago, send a list of them *at once*, and we will select what we can use, giving you further information, and full particulars about shipping, etc. Do not send eggs without instructions from us.

As intimated in our "Scheme" in March OÖLOGIST we will hold ourselves responsible for all eggs loaned, and we have been fortunate in securing space on the side of the building, where the eggs will be best protected from bright light. We shall issue a Souvenir Catalogue of the exhibit, giving a complete descriptive list of same, with names of contributors, etc., which will be distributed gratuitously to all interested.

This "Scheme" has advanced so far already that it is sure to be a grand success, and it now *rests with you* to aid in making it doubly so. Our only desire in extending the offer, is to give all a chance to exhibit sets that may wish knowing full well that "numbers count" in making an egg exhibit, and that the more that enter into it, the greater will be the ultimate success. Remember

you must write at once, if you wish to be "in it." It is barely possible that after May 20th we can include a few extra rare sets that may be taken this season, or that are offered, but it will depend entirely on space, and the rarity of the species.

Trinominal Nomenclature.

Trinominal nomenclature consists in applying to every individual organism, and to the aggregate of such organisms now known to intergrade in physical characters, three names. One of these expresses the sub-specific distinctness of the organism from all other organisms. The other two express respectively its specific indistinctness from, or generic identity with certain other organisms.* The three, written consecutively constitute the technical name of any sub-specifically distinct organism.

The system proceeds upon a sound, scientific principle, underlying one of the most important problems of the present time, namely that of the variations of animals under different physical conditions of environment and thus of the origin of species itself. The system is also connected with the subject of geographical distribution of animals.

As the study of Zoölogy progressed and the study of animals of large areas became better known, it was found that often different ones of the same species varied so much in color, habits, size, etc., that a person not well acquainted with these variations would be almost certain to class the specimens as different species. It also became evident that individuals of the same species were often greatly modified through the influence of latitude, longitude, elevation, temperature and certain other climatic conditions, etc. Such local forms were often extremely

* *M. insipita* (generic) *raselata* (specific) *falax* (sub-specific).

different from one another. All that kept them from being rated as different species was the fact that they were known to intergrade near the confines of their respective habitats. As examples we will take birds. The same facts, however are applicable to any other branch of the animal kingdom, or even to plants.

When the Song Sparrows were carefully studied, it was found that those living in one part of the country differed very much from those in some other part. In the Eastern U. S. and as far West as the Great Plains, the differences between individuals from different parts was very trifling. They would all answer to the same description. Their surroundings, their environment, was much the same in every district and no barriers prevented a free migration from one part to another. Why should they be different? These sparrows were named *Melospiza fasciata*.

But in Arizona and New Mexico the surroundings were different. The hot, dry climate had changed the color of our little bird. The difference could not be called specific as on the borders of their territory the differences became less evident. They intergraded. They were given the name *Melospiza fasciata fallax*; retaining the generic and specific names, but having the subspecific term added. *

In Colorado, Utah and Northward, they were found to differ from the Arizona variety, as well as from the Eastern form. They were named *Melospiza fasciata montana*.

It is not to be inferred that these varieties are gradations between *Melospiza fasciata* and some other bird. They are only the subjects of variations between groups of individuals of the same species. These groups have been subjected to different environments. Any one of these might be called "typical" and the others "varieties." The

fact that they intergrade shows us that they are but varieties of the same species.

There has been some condition or set of conditions active enough to start them in some particular line of variation. Why can not those conditions carry them on in these variations? They certainly will unless the subject has become perfectly adapted to its surroundings.

The better the two varieties become adapted to their environments, the more different will they become, because their environments differ. Some of these are specifically different. The only thing that prevents their rating as different species is the fact that they intergrade on the borders of their territories. If something should transpire to more completely separate them then they would be known as distinct species.

S.

* *Melospiza fasciata*. Eastern U. S. to Plains.
Melospiza fasciata fallax, New Mexico and Arizona.

Melospiza fasciata montana. Colorado, Utah and northward.

Melospiza fasciata heermannii. Interior Southern Cal. East into Nevada.

Melospiza fasciata samuelis. Coast of Calif.

Melospiza fasciata guttata. Coast of Oregon and Washington.

Melospiza fasciata rufula. Coast of Brit. Col., north to Sitka.

It is also to note the series of Shore Larks, with their localities and the measurements of types.

Otocoris alpestris, W. 4.44. T. 3.02. Bill, .91. Northwestern N. A., Lab. and Greenland.

O. alpestris praticola, W. 4.17. T. 2.93. B. .83 Upper Miss Valley.

O. alpestris leucotoma, W. 4.39 T. 2.96. B. .89. Brit. America and Alaska.

O. alpestris arenicola, W. 4.27. T. 3.25. B. .81. Gt. Basin and Rocky Mts.

O. alpestris grandis, W. 3.87. T. 2.57. B. .80. Eastern Texas.

O. alpestris chrysotoma, W. 3.98. T. 2.91. B. .83. Mexico.

O. alpestris rubens, W. 3.51. T. 2.71. B. .77. California

O. alpestris strigata, W. 3.99. T. 2.75. B. .76.

To the Public.

WORLD'S COLUMBIAN EXPOSITION, CHICAGO, March 30, 1893.—To the Public: Because of many misrepresentations and misstatements relative to Exposition management and affairs being in circulation through the press and otherwise, both in this country and abroad, and in reply to many letters of inquiry or complaint touching the same matters, it seems advisable that some official statement regarding them should be made to the public. Therefore I respectfully ask that the widest publicity be given to the following facts:

1. The Exposition will be opened in readiness for visitors May 1.

2. An abundance of drinking water, the best supplied to any great city in the world, will be provided free to all. The report that a charge would be made for drinking water probably arose from the fact that hygeia water can also be had by those who may desire it at one cent a glass.

3. Ample provisions for seating will be made without charge.

4. About 1,500 toilet rooms and closets will be located at convenient points in the buildings and about the grounds, and they will be absolutely free to the public. This is as large a number in proportion to the estimated attendance as has ever been provided in any exposition. In addition to these there will also be nearly an equal number of lavatories and toilet rooms of a costly and handsome character as exhibits, for the use of which a charge of five cents will be made.

5. The admission fee of 50 cents will entitle the visitor to see and enter all the Exposition buildings, inspect the exhibits, and, in short to see everything within the Exposition grounds, except the Equestrian Village and the reproduction of the Colorado cliff dwellings. For these as well as for the special attractions on Midway Plaisance a small fee will be charged.

6. Imposition or extortion of any description will not be tolerated.

7. Free medical and emergency hospital service is provided on the grounds by the Exposition management.

8. The Bureau of Public Comfort will provide commodious free waiting-rooms, including spacious ladies' parlor and toilet rooms in various parts of the grounds.

H. N. HIGGINBOTHAM, President.

Early Nesting.

Mr. F. B. Jewett of Los Angels, California, writes of taking a full set of Mourning Dove on the fifth of February, and Mr. Barlow of Santa Clara, records a complete set of the Anna's Humming bird on February 23d and that the friend with him found a nest, with one young and one egg.

Mr. Fred D. Snyder a '95 Medic of the University of Michigan who has been in the employ of "Lattin" most of the time since '87 will have charge of the Zoological Exhibit of the Ward's Natural Science Establishment at the World's Columbian Exposition.

The New and Second Hand Book List, mentioned on page 158 of this Oölogist, will be mailed free to all applicants.

Davie's Nests and Eggs

NORTH AMERICAN BIRDS,

Re-Written and Greatly Enlarged, with an Introduction by J. Parker Norris, and Full Page Illustrations of Nests, etc., by Theodore Jasper, A. M., M. D., & W. Otto Emerson.

This work is descriptive of the Nests and Eggs of the Land and Water Birds of North America which includes all the species known to exist—those that occur or are indigenous north of the Southern United States boundary, including Greenland and the peninsula of Lower California.

The breeding range of each species is given, the time of nesting, the exact number of eggs, their color and size together with the chief characteristics of the birds.

The arrangement of the work is according to the new nomenclature of the A. O. U. Code and Check List, and the old numbers (Ridgeway's) as used in former editions, are placed to the right of each species. Throughout the text all the common names of the birds are to be found, and a COMPLETE ANALYTICAL INDEX of these is given.

An invaluable book as an aid for the identification of specimens to all those collecting in the field.

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FRANK H. LATTIN

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This new museum is located on Falls street, only a few steps from R. R. Depots—Electric car line passes by its entrance—and occupies a new three story building, which cost thousands of dollars to build and fill—Among the hundreds of attractions within will be found a large and magnificent collection of Birds and the LARGEST COLLECTION OF BIRDS EGGS in a Public Museum in the State.

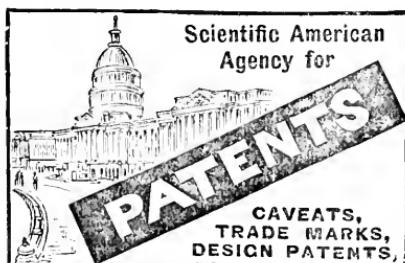
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We give size and number of pages, our price and the amount necessary to add to the same if you desire the books you order sent by mail or express, *prepaid*.

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Join the club that is being organized to attend the World's Fair at Chicago. You can pay for your ticket in weekly or monthly payments; the ticket covers railway fares, board, room and excursion tickets. The United World's Excursion Co. is the strongest in the United States, apply to Local agent or write to Excursion Co., N. E. Dep't, 406 Exchange Bldg, Boston, Mass.

An Announcement.

I wish to announce to my many friends and patrons, that I have removed from Geneva to Albion, N. Y., having formed a partnership with Mr. F. H. Lattin, whom you all well know and many through years of correspondence. By combining our stocks, we believe we have the largest assortment of Eggs, Bird Skins, Shells, Fossils, Minerals, Curiosities, Books and Naturalists' Supplies in America. My monthly lists will be discontinued, but other lists will be issued from time to time. We have now in press a more complete catalogue of what we have for sale than has heretofore been offered our patrons. We have also just issued an unique "WHOLESALE LIST" giving low prices on hundreds of specimens, of which our stock is so large that we are enabled to quote hundred and thousand rates. This list is for DEALERS ONLY and for those who desire to buy to sell again. We shall continue to offer bargains in all departments and you will do well to correspond with us when in want of anything in the Curio, Specimen or Naturalists' Supply line.

Fraternally yours,

WALTER F. WEBB.

Washington, April 24th, 1893.

I have used Mr. Lattin's Sliding Calipers for several months now and consider them superior to any instrument of this kind I have seen. It is readily manipulated, safer in every way and more work can be done with it with greater accuracy than with other contrivances of this kind. I have used several others and prefer this to all. Every Oologist should use it,

CHAS. E. BENDIRE,
Hon. Curator Oological Dept.

\$300.00 WORTH OF PRIZES

Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
THE OÖLOGIST.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7.50
Ridgway's "Mammal of North American Birds".....	7.50
Chamberlain's "Nuttall's Ornithology" (2 vols.).....	8.00
Goss's "Birds of Kansas".....	7.50
Wilson's (and Bonaparte's) "American Ornithology".....	7.50
Maynard's "Birds of Eastern North America" (text complete). 15.00	
Washington Irving's Works, 10 vols.....	7.50
Wm. M. Thackeray's Works, 10 vols.....	10.00
Chas. Dickens' Works, 15 vols... 11.25	
Jenk's "Comprehensive Commentary of the Holy Bible." 5 large 900 paged Volumes.. 25.00	
Sir Walter Scott's Works, 12 vols 12.00	
\$10 worth of Phonographic Books and Publications.....	10.00
An 8-qt. Jack Frost Ice Cream Freezer.....	6.50
A Due-Bill good for \$31.50 towards a new \$46.50 Marlin Repeating Rifle.....	31.50
A Due-Rill good for \$33.00 towards a new \$15.00 American Union (same as New Home) Sewing Machine.....	33.00
A Due-Bill good for \$12.00 towards a new \$20 double case Odell Type writer.....	12.00
2nd Prize each month will be a part of "Maynard's Birds of Eastern North America," each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50.	
3d Prize—Langille's "Our Birds in Their Haunts", \$3.00	
4th Prize—Brewer's "North American Oölogy" unbound, no plates, original price about \$3.00.	
5th Prize—Baird's Review of American Birds" originally sold at \$2.00.	

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded the OÖLOGIST for 1893 bound in cloth and gilt.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the OÖLOGIST.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than June 1st. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talk about Business."

3d A combination microscope.

4th An agate watch charm.

5th A Pocket Knife.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 cts.)

All Judges' prizes are sent by mail prepaid.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.

THE OLOGIST.

Monthly. 50c. per Year.

VOL. X.

ALBION, N. Y., JUNE, 1893.

NO. 6

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 15 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly first-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Exchange cards and coupons (subscription) will be accepted for "Wants" and "Exchanges" only and according to conditions stated thereon.

FOR SALE or EXCHANGE—One 42 inch bicycile, in good condition. Will sell for \$10.00 cash or best offer. Cost \$40. FRED W. PARKHURST, Bath, N. Y.

SEND 100 Columbian Stamps and 2c. unused and receive set of Eggs with data. Stamps, Curios, Eggs, Tackle and Printing Press for Minerals, Relics and stamps. A. R. HUTCHINSON, Gaines, N. Y.

ATTENTION.—A receipt for the best arsenical soap for canceled Columbian and U. S. stamps. Write what you have. W. E. LOMCKS, Peoria, Ill.

WANTED.—Orders for Mounted Birds and all collectors and others to send for quotations on any specimen Skin or mounted to order, orders filled at short notice. Price list for stamp. EDGAR A. FERO, 115 Ontario St., Cohoes, N. Y.

FOR EXCHANGE.—Skins of Ivory-billed Woodpecker for Eggs in sets or cash. HENRY DAVIS, North Granville, N. Y.

BIRDS EGGS in sets and singles for sets. Would like to exchange books, papers, eggs and possibly cash for ones key. F. A. GREGORY, 124 N. Court St., Rockford, Ill.

MRS. A. MEARES, John's Pass, Fla. will send postpaid 5 lbs well assorted shells, \$2. 2lbs. \$1. Sawfish saws and lots of curiosities for sale or exchange for dry goods.

FOR EXCHANGE eggs in sets with full data for Star tobacco tin tags. Want 2000 or 3000. HENRY DAVIS, North Granville, N. Y.

WANTED.—A copy of Ridgeway's Manual, write stating condition and terms, will give good exchange in either sets or singles. Semipalmed Plover, or others equally rare. Specimens to exchange. W. S. GRAHAM, Beecher, Ill.

EX. NOTICE. Look! Look! I will exchange first-class birds skins and mounted birds for stamps, birds eggs or printing material. F. T. CORLESS, Los Gatos, Calif.

TO EXCHANGE—1 Maynard rifle, .75 cal., good condition; 250 arrowheads and other Indian relics for books, papers, shot gun, camera, cash, etc. BEERT GILLETTE, 833 S. Ashland Ave., Chicago, III.

FINE SETS of Eggs and Skins given in exchange for star tobacco tin tags. HENRY DAVIS, North Granville, N. Y.

BUZZARD, Hawk, Owl, Carrion Crow and Flycatchers complete sets for ex. for same. BOB MORE, Box 236, Lecatur, Texas.

COINS WANTED—U. S. and foreign, silver and copper, old U. S. cents especially. Have to exchange first-class sets and a few coins. D. B. ROGERS, Ellis, Ellis Co., Kans.

TO EXCHANGE—Fragments of Indian pottery from the banks of the Mississippi for Indian relics from other localities, arrowheads preferred. Four large pieces of Pottery given for each per set Arrowhead. All answered. HAROLD SANDERS, Davenport, Iowa.

I HAVE a large collection of Hawks and Owls eggs in sets, for sale or exchange. Write for particulars. W. B. PORTER, Berwyn, Ills.

WANTED. Sets of *Stegnoptides*, *Aesopus*, *Heronimus*, *Paludicola*, *Crocyops* and *Muricaria*. Send lists, naming articles desired. Have North American and Foreign skins and sets. N. HOLLISTER, Delavan, Wis.

WANTED. Bird's eggs, mounted birds, stamps, shells, minerals, books, firearms type writer, printing type, printing press and scroll saw. Will give in exchange fine birds skins and mounted birds, send lists. F. T. CORLESS, Los Gatos, Calif.

EXCHANGE NOTICE. A pair of strapped climbers, 107 copies of 43 different publications on O and O., Vol. 7, 8 and 9 of Auk, 12 No's Cosmopolitan magazine for 1892, a 38 cal. Colt, powder and ball revolver, Skin of Gt. Horned Owl, skulls of Fox, skunk and ermine; a young Natib, in alcohol for first class eggs in sets. H. C. CAMPBELL, Linnsburgh, Rens., Co. N. Y.

TO EXCHANGE for best offer. Several Yaggy Anatomical Studies (charts and manikins) practical for doctors, teachers and student. Musical instruments especially wanted in exchange. W. G. CAREY, Box 288, Rochelle, Illinois.

WANTED.—Star tobacco tin tags in lots of 10, 20, 30, 40 or 50. Will give in exchange eggs in sets taking tags at 3c. each. HENRY DAVIS, North Granville, N. Y.

\$50.00 worth of first class sets and singles to exchange for Stamps, Revolvers, musical instruments, etc. Send particulars, value, etc., and receive list. C. TURTON, Los Angeles, Cal.

FOR EXCHANGE.—The following Books: (new) Scott's Poetical works, Life of James G. Blaine and John A. Logan, Ivanhoe, David Copperfield, Just In Time, John Halifax Gentleman and Life of Jay Gould, for Books on Ornithology and Oology or sets with data that I can use. ARTHUR, W. BROCKWAY, Hadlyme, Conn.

WANTED.—Orders for Mounted Birds and all collectors and others to send for quotations on any specimen Skin or Mounted to order, orders filled at short notice. Price list for stamp. EDGAR A. FERO, 116 Ontario St., Cohoes, N. Y.

WILL accept as many Star tobacco tin tags between now and Sept. 15th as you can send me giving you in exchange some rare bargains in eggs in sets with full data for same. HENRY DAVIS, North Granville, N. Y.

FOR EXCHANGE.—I will collect fine Cal. sets with nests if desired. Collected by myself and positively identified. Thurber's Junco, Louisiana Tanager, Swainson's Hawk, Costas, Black-chinned, Anna's Hummers, Least Vireo, Cal. Screech Owl and many others. Desirable sets wanted. RALPH ARNOLD, Pasadena, Cal.

A3t

CIGARS.—Want you to try my celebrated cigars. Send stamp for price list of samples. Address, G. W. WALTON, Postmaster, Fal mouth, Pa.

A3t

WILL every person in California, interested in forming an Ornithological and Oological society, send his address with suggestions to EDWARD WALL, San Bernardino, Cal.

TO EXCHANGE.—Eggs in sets for same. Some rare eggs offered and some common eggs wanted. Send your list and receive mine. JOHN A. DONALD, Decatur, Texas.

TO EXCHANGE.—First-class sets with data (A. O. U.) 38, 33, 412, 477, 5, 1, 53, 61, 622, 703, 763, 615, E. S. Also singles for sets with data. R. P. GILLESPIE, Columbus, Miss.

PARTIES making a collection of bird skins, should send for our latest list. We carry in stock now several hundred species, including some foreign. Special discount for next thirty days. F. H. LATTIN & CO., Albion, N. Y.

BROWN CREEPER. Red-bellied Nuthatch, Black-poll Warbler nicely stuffed for 50c. each, postpaid or the three for \$1.50. Have you heard about, or seen one of these insertion barrels? It is an invention which allows you to shoot a 32 or 38 cal. C. F. shell in your 12 or 16 gauge shot gun. Everybody should send for my catalogue and circulars telling you about this wonderful invention. JAMES P. BABBITT, Tannertown, Mass.

EXCHANGE.—Collectors wishing to exchange eggs in sets with data this season send list and receive mine. Correspondence solicited. J. W. SHAFFER, Box 407, Clarion, Iowa.

TO EXCHANGE.—Curious cones from the Black Pine of the "Itaska" Park region, 5 for 10 cts worth of other curio. GEO. N. BATEMAN, Park Rapids, Minn.

EGGS of Caspian Tern, and Am. Herring Gull to exchange for eggs or curios, not in my collection. ED. VAN WINKLE, Vans Harbor, Mich.

EXCHANGE.—Sets and singles of Texan birds to exchange for eggs not in my collection. Address, GEO. DOWELL, Austin, Texas, care of John Dowell.

WANTED.—A few choice bird skins, from Farallon Islands, and Pacific Coast region. Send lists with prices, or what you desire in exchange. F. H. LATTIN & CO., Albion, N. Y.

WANTED.—Sets of Nashville Black and White, and Lucy Warblers, with nests, will pay cash. Address, WILL BURNETT, Box 9, Fort Collins, Colo.

TO EXCHANGE.—Sets and singles for sets of (A. O. U.) 27, 28, 10, 61, 63, 184, 193, 194, 280, 343, 365, 615, 718 and many others. FRANK WILLARD—510 N. Cherry St., Galesburg, Ill.

OÖLOGISTS WANTED.—We want copies of July-Aug., 1886; Jan.-Feb., 1887 or Dec., 1886 with Jan.-Feb., 1887 attached, June, 1888 and April, 1889. OÖLOGISTS. We also want copies of Lat. 1885, "Oölogist's Hand-Book." For each copy of the above five publications or for any two copies of the Oölogist for March '92, May '92 or April '93 you will send us before July 1st we will give a copy of the "New Standard Catalogue" or a White Metal Blowpipe or (an Embryo Hook or a Tape Measure Pencil or a copy of "Insect Collecting" or 25 Cents worth of 1890, 1891 or 1892 OÖLOGISTS. F. H. LATTIN & CO., Albion, N. Y.

OH, LOOK.—I have the following first-class sets with complete data, etc., for sale. By the "New Standard Catalogue" these sets amount to \$150.00, but I will dispose of them at less than one-third their value. Will also include copies of "Davies Nest and Eggs," "Bird-nesting in Northwestern Canada," one volume of the "Oölogist" and a set of instruments in Russia leather case (have never been used). Murre, California Murie, Western Gull, Laughing Gull, Am. Herring Gull, Franklin's Gull, Kitiwake Gull, Sooy Tern, Noddy Tern, Royal Tern, Bridled Tern, Least Tern, Wandering Albatross, Yellow-billed Tropic Bird, Cormorant, Florida Gallinule, Red Phalarope, Wilson's Phalarope, Cooper's Hawk, Broadwing Hawk, Black Vulture, Turkey Vulture, Golden Eagle, Am. Osprey, Texan Night Hawk, Texan Screech Owl, Screech Owl, Florida Burrowing Owl, Golden-fronted Woodpecker, Red-cockaded Woodpecker, Red-breasted Sapsucker, Paraque, Buff-bellied Hummingbird, Costas, Annas, Black-chinned, Ruby-throat, Little Flycatcher, Mexican Crested Flycatcher, Scissortailed Flycatcher, White-necked Raven, Northwest Crow, Florida Crow, Bronzed Grackle, Boat-tailed Grackle, Great-tailed Grackle, Florida Grackle, Louisiana Tanager, Hepatic Tanager, Bell's Vireo, Red-eyed Vireo, Blue-wing Warbler, Prothonotary Warbler, Bewick's Wren, Long-tailed Chat, Carolina Chickadee, Am. Robin, English Sparrow. I will sell the above at an astonishing low price. Write for particulars to H. W. ISAACS, Prospect House, Niagara Falls, N. Y.

I HAVE a collection 650 eggs to sell for \$25, worth \$80, or will exchange for other eggs. Send lists and receive mine. All answered. PAUL McGINTY, No. 120 Lumpkin St., Athens, Ga.

WANTED.—Articles on Oology and Ornithology for the Western Reserve Naturalist. Have some fine 1st class sets to exchange for same. Address F. C. HUBBARD, L. B. 161, Geneva, O.

WANTED.—Star tobacco tin tags in lots of from 100 to 5000. For every 100 star tags sent me between now and Sept. 15th I will give any one of the following sets with full data: Anna's Hummer n-2, Costas' Hummer n-2, Black-chinned Hummer n-2 or will accept tags allowing you 3c. each in exchange for eggs. For 1000 Tags a fine skin of Ivory-billed Wood-pecker put up in first-class condition. For 200 tags one gold filled watch case guaranteed to wear 15 years with Am. Waltham or Elgin movement, value \$25. For 1000 your own selection of sets to the amount of \$60 from a large list of rare eggs. For 5000 any of the following: One gold watch case, value \$50. One Remington double barrel breech loading shot gun with full set reloading tools and 200 loaded shells, cash value \$50. Sets your own selection from such sets as Hawks, Owls, Gulls, Ducks, etc., etc., or accepting tags at rate as stated before. You can forward me tags in small or large lots. Match box is a good thing to send them in. Any other information cheerfully furnished. HENRY DAVIS, North Grinnell, Wash. Co., N. Y.

FOR EXCHANGE.—Pied-billed Grebe 1-6, Cassin's Anhinga 1-1, Western Gull 1-2, Laughing Gull 1-3, Sooty Tern 1-1, Bridled Tern 1-1, Black Tern 1-2, 1-3, Noddy Tern 1-1, Leach's Petrel 1-1, Brandt's Cormorant 1-1, Am. Bittern 1-4, Least Bittern 1-4 1-5 1-6, Limpkin 1-6, King Rail 1-8, Virginia Rail 1-8 1-10, Sora Rail 1-6 1-9 1-10, Fla. Gallinule 1-7 1-8 1-10, Am. Coot 1-6 1-8 1-10, Bartramian Sandpiper 1-4, Spotted Sandpiper 1-1, Kildeer 1-1, 1-9, White 1-8 1-10, Turkey Buzzard 1-2, Black Vulture 1-2, Red-tailed Hawk 1-2 1-3, Red-shouldered Hawk 1-2 1-4, Am. Sparrow Hawk 1-4, Screech Owl 1-1 1-6, Texan Screech Owl 1-1, Anna's Hummingbird 1-2 1-2, Black Phoebe 1-1, Bobolink 1-1 1-5, Yellow-headed Blackbird 1-1 1-5 1-6, Meadow Lark 1-1 1-5 1-6, Long-billed Marsh Wren 1-1 1-5 1-6, Murre 1-1, Calio mar Murre 1-1, Yellow-billed Magpie 1-5, Bank Swallow 1-5, Cliff Swallow 1-4 1-5 1-6, Am. Crow 1-1, Florida Crow 1-5, Yellow-billed Cuckoo 1-4, Black-billed 1-1. Who wants them? If it is you send your list and make an offer. None but strictly first-class sets given or accepted. Correspondence with reliable collectors desired. CHARLES M. ELDREDGE, 314 Chamber of Commerce, Chicago.

THE FOLLOWING is the list of species we now have offered for the World's Fair exhibit: 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15a, 16, 21, 29, 32, 33, 30, 30a, 37, 38, 40, 42, 13, 17, 19, 51, 53, 55, 58, 59, 61, 64, 65, 67, 69, 70, 71, 72, 74, 75, 6, 77, 79, 80, 83, 86, 90, 92, 101, 105, 108, 112, 113, 117, 119, 120, 120c, 122, 123b, 125, 126, 128, 136, 138, 140, 111, 144, 147, 159, 178, 182, 184, 188, 190, 191, 192, 194, 196, 199, 200, 201, 3, 2, 203, 205, 207, 208, 12, 21, 216, 219, 221, 222, 223, 224, 225, 226, 229, 233, 254, 255, 258, 261, 263, 264, 267, 271, 273, 275, 278, 280, 281, 285, 289, 293a, 293b, 293c, 294, 294c, 295a, 300c, 301, 302, 305, 310, 311, 313, 315, 316, 318, 319, 320, 320a, 326, 329, 331, 332, 333, 336, 347, 357a, 357b, 339, 339a, 340, 342, 343, 348, 349, 351, 352, 353, 359, 360, 362, 331, .65, 366, 367, 368, 369, 370, 373, 373a, 373b, 373c, 373d, 373e, 378, 378a, 379, 381, 384, 385, 387, 388, 390, 393, 394, 396, 397, 399, 402, 404, 406, 408, 410, 412, 413, 416, 417, 418, 419, 420, 430a, 430c, 421, 423, 428, 429, 430, 431, 436-

439, 443, 444, 447, 448, 452, 453, 451, 456, 457, 458, 461, 462, 463, 464, 465, 466, 466a, 467, 473, 474b, 474c, 475, 476, 477, 477a, 478, 478a, 480, 481, 482, 483, 484, 485, 487, 488, 489, 490, 493, 494, 495, 496, 497, 498, 499, 500, 501, 501b, 503, 505, 503a, 503, 507, 508, 509, 510, 511, 511b, 512, 518, 519, 519b, 529, 530, 530a, 531, 533, 534, 536, 538, 539, 540, 540a, 542a, 546, 549, 552, 552a, 551b, 558, 560, 560a, 563, 563a, 567, 567a, 567c, 573, 574, 581, 581a, 581d, 581e, 584, 586, 587, 587a, 588a, 588b, 591b, 593, 593c, 594, 595, 596, 597, 599, 601, 602, 604, 605, 607, 608, 610, 611, 612, 613, 614, 616, 617, 619, 620, 621, 622a, 622b, 624, 627, 628, 629c, 631, 632, 633, 638, 639, 641, 642, 645, 646a, 652, 657, 659, 662, 663, 667, 671, 673, 674, 676, 677, 679, 681, 681a, 683, 683a, 684, 687, 698, 700, 701, 702, 703, 704, 705, 706, 707, 710, 711, 713, 715, 718, 718b, 719, 719b, 721, 721a, 722a, 724, 725, 726, 727, 727a, 728, 729, 730, 731, 732, 733, 735, 736, 742a, 743, 743a, 746, 751, 751a, 754, 755, 756, 758, 758a, 759a, 759b, 761, 761a, 764, 765, 766, 767, 768. We also have a fine assortment of foreign eggs. Any parties having clutches not on above list, that they desire exhibited, we shall endeavor to make room for them, if they advise us during June. We shall probably not be able to exhibit any new sets after July 1st. Address as early as possible, F. H. LATTIN & CO., Albion.

Blaine's Handy Manual of Useful Information

There has just been published in Chicago a most valuable book with the above title, compiled by Prof. Wm. H. Blaine, of Lancaster University. Its 500 pages are full of just what its name implies—useful information—and we fully advise all our readers to send for a copy of it. It is a compendium of things worth knowing, things difficult to remember, and tables of reference of great value to everybody, that it has never before been our good fortune to possess in such compact shape. Our wonder is how it can be published at so low a price as is asked for it. It is handsomely bound in flexible cloth covers, and will be sent to any address, postpaid, on receipt of 25 cents in postage stamps, by the publishers,

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Series, sets or singles of the Am. Herring Gull with data for 12cts per egg. Series will be sent so as to show the greatest variation in size, coloration and marking. Parties desiring large series write first.

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my 25 cent address in your Lightning Directory I
have received over 2,000 parcels of mail. My
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turers, etc., are arriving daily, on valuable parcels of
mail, from all parts of the World. J. A. WARE.

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Aporrhais biangulata	15
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Haninea minor	15
Volsella Meeki	15
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" crispil	.15 to .75
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Margarita Nebrascensis	15
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but	.20 to .25
Fossil leaves	.15 to .75
Agates, rough	.10 to .50
" polished	.25 to \$2.00
California Onyx, polished	.40 to \$1.75
Petoskey Agates, "	.25 to .75
Fossil ferns	.15 to .75
Petrified wood	.10 to .50
Agatized wood	.10 to .50
Porcelainite	.10 to .25
Honey-comb lava	.10 to .25
Sponge lava, will float in water	.15 to .50
Lava has been melted, and run like molasses	
candy	.15 to .50
Antelope horns, on upper part of skull, per	
pair	\$1.50 to \$2.00
Buffalo horns, per pair	.50 to \$1.50
Rattles from Rattlesnake	.10 to .25
Corals from Bahamas, Florida and St. Croix	
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Small mixed shells from West Indies, per pint	.50
Large Assortment of showy American and	
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Send for price lists.

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Montana.

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We have a very large stock of the following curios, shells, etc., and during the next thirty days will sell at annexed prices.

Tarantula, mounted in box	\$.35	\$ 1.00
Scorpion in box	.35	.75
Trap-door Spiders, in box	.50	
" " nest	.25	.75
" " in box	.75	
Big Tree Bark, choice specimens	10	1.00
Pods of Royal Poinciana, or Sabre bean	15	.35
Cassia Beans, package	10	
Black-eyed Susans, (Guinea peas or Licorice seeds) packages	10	
Shark Eggs	10	
Devil Fish Eggs	15	
Porcupine Fish, small	.75	.300
" " large	5.00	10.00
Cow or Trunk Fish	.50	1.00
Toad Fish		1.00
Hawk-bill Turtle, mounted, polished back		.75
Tortoise Shells, polished (Green Turtle)	5.00	10.00
Mammoth Sponges, 2 to 3 ft. in diam.	3.00	
Sturgeon Plates	.05	.25
Sting Ray Stings		.15
Sharks Teeth	.05	.25
Lucky Tooth from Cod	.10	
Saw Fish Saws, 8 to 12 inches	.35	.75
" " 2 feet	1.50	3.00
" " 4 to 5 feet	4.00	10.00
Alligator teeth, $\frac{3}{4}$ inch	.05	
" " 1 inch	.10	
" " $\frac{1}{2}$ inch	.15	
" " $\frac{1}{2}$ inch	.25	
" " 2 inches	.50	
Porpoise Teeth	.10	
Sperm Whale Teeth	2.00	5.00
Walrus Tusks	3.00	6.00
Horned Toads	25	.50
" " in box, nicely mounted	.75	
" " on orange wood plaque	.75	
Gray Sea Bean	.03	
Red Sea Bean	.03	
Yellow Sea Bean	.03	
Brown-banded Sea Beans	.05	
Liver Beans	.05	
Mimosa Seeds, package	0	
Long Red Sea Bean, each		
Chinese Horn Nuts		
Beetle Nuts		
Coffee Beans		
Sea Beans in pod		
Cassia Beans in Pod		
Coral Bean pod		
Black-eyed Susans in pod		
Old Womans Tongue		
Ivory Apples	25	.50
Resurrection Plants	10	.15
Bahama Sea Urchin, white or purple	15	.35
Skate Eggs		.06
Sea Horses, Atlantic	25	1.00
" " Medit.	35	.50
Hermit Crab in shell	20	.75
Sand Crab	10	.25
Egg Cases of Periwinkle	15	.25
Alligators, small, 12 inch		1.50
" " 5 inches		.20
" " 2 feet		.20
" " 3 feet		.50
" " one extra large, 11 ft. long	75.00	
Alligator Skulls	5.00	15.00
Hammerhead or Leopard Shark eggs, Pacific		\$.10
King or Horse-foot Crabs		1.50
Acorn Barnacles, Pacific		.05
Goose Barnacles		.05
Club-spined Urchin, Cidaris tribuloides, Bahamas	25	.75

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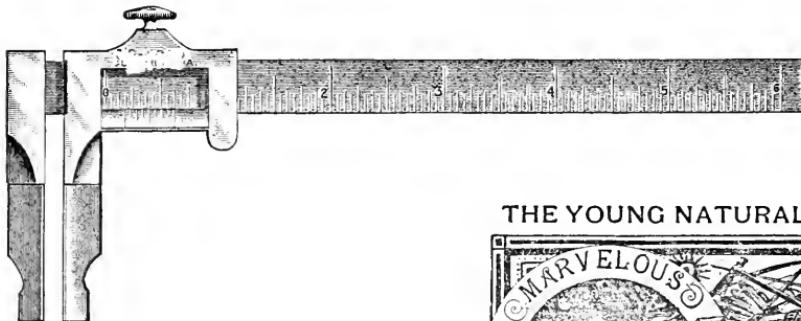
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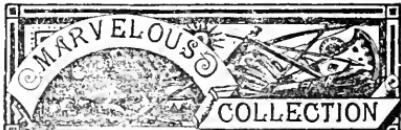
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THE OÖLOGIST.

VOL. X.

ALBION, N. Y., JUNE, 1893.

NO. 6

Taking the Eggs of the Peregrine Falcon.

Although the Duck Hawk visits annually almost all parts of the United States, still native sets of its eggs are by no means frequently secured and hence are often wanting even among large collections. Some collectors content themselves with imported sets, which are more easily obtained than those collected within the United States and the eggs exhibited in our public museums, etc., are usually of this type. Nevertheless, sets of Duck Hawk's eggs are occasionally found within our own boundaries—as is demonstrated by the fact that two beautiful sets have been secured *this year* by the writer and some friends. This bird builds its nest in places that are almost inaccessible and the taking of the eggs is usually attended by all the difficulties and dangers consequent upon cliff-climbing. To render obvious some of these difficulties, we will give a brief account of the taking of the first set secured this year.

The Duck Hawk (*Falco peregrinus*), otherwise known as the "Great Footed Hawk," is itself a most interesting bird. Almost all ornithological writers have dwelt with admiration upon its wonderful power, its rapid flight, and its great boldness and courage. It is, moreover, a beautiful bird, blending in its plumage bluish-slate and ash gray colors with darker tints, and showing in front a white neck mottled with dark longitudinal lines and a whitish breast and belly marked throughout with dark brown transverse bars. The plumage of the two sexes is very similar but the female is smaller than the male. The Duck Hawk is nowhere a common species. It resides throughout the year in the Northeast and is more

frequently observed in the neighborhood of the sea coast than in the interior. It is a terror to water-fowl which constitute a large portion of its prey, but they are by no means its only food. The swoop of this falcon, when rushing upon its quarry is remarkable both for rapidity and force; with almost inconceivable velocity it pursues its prey through all its turnings and windings, and when within a few feet of its intended victim protrudes its legs and talons to their full extent, almost closes its wings for a moment, and the next instant grasps the prize and bears it away. Sometimes the prey soars into the air, and seeks safety by trying to keep above the falcon, until both are lost to ordinary sight, but the falcon soon gets uppermost and strikes its victim at last. The strength of this falcon is shown by the ease with which it can carry through the air a bird of fully its own weight. The cry of the Duck Hawk is similar to that of the Sparrow Hawk only much louder and more intense. The breeding season is very early. Its nest—which is built on ledges of high rocks, either along the seacoast or on inland precipices and ravines—is begun about the first of April, and is constructed largely of twigs, with some grasses and sometimes seaweed. The eggs, which are from two to four in number are almost spherical in form, and in color are reddish-brown covered with numerous minute spots and blotches of darker shade.

Mt. Tom, in Hampshire County, Mass., has doubtless been the birthplace of many broods of young Duck Hawks. Indeed, it is the opinion of the writer that this species of falcon has nested on this grand old mountain each year for many decades. This opinion

is founded upon personal observation and the knowledge of sets which have been taken from the shelves which now exist and have existed on is almost perpendicular sides. In past years the writer has never failed to locate a nest when exploring this mountain during the breeding season, and others, in still earlier years, have demonstrated the preference of the Duck Hawk for an eyrie in this mountain. On April 19th 1863, one Mr. Bennett of South Hadley, Mass., secured a set of four eggs from this mountain and killed the female bird. R. B. Hilderth, Esq., of Springfield Mass., found a nest of young Duck Hawks on Mt. Tom, May 30, 1862, and tells us that the falcons were then almost full-fledged. From these two dates we see that the eggs are not only laid early in the year but that the embryo develops rapidly and is soon hatched. In 1875, Mr. F. W. Carrier, now of Holyoke, Mass., secured a set of three eggs from a cliff on Mt. Tom and sold them to a collector for a handsome sum. Mr. Carrier is an expert cliff-climber—having acquired dexterity in this direction in his former occupation of bridge-building. He (together with Mr. Harry Smith, of Smith's Ferry, Mass., and the writer) has probably taken as many native sets of Duck Hawk's eggs as any one man in America. The nest of the Duck Hawk is not easily located by one, unaccustomed to the work. Missiles may be hurled from the summit of a cliff and may even strike the rocks in close proximity to the ledge which shelters the nesting bird and she may not leave the eggs until some approaching weapon warns her of imminent danger. Her courage is almost invincible. When driven from the eyrie both birds may quickly rise in the air and pass rapidly beyond the limit of human vision and then with almost incredible velocity swoop down in close proximity to the invading party. Under such

circumstances, if a shot-gun is at hand and such action be deemed advisable, a good marksman may secure an interesting specimen.

Of the two sets of eggs taken this year by our party, the best (which consisted of four, the other being a set of three) was taken on the morning of April 23d from a ledge on the Western side of Mt. Tom, about one-third the distance from the southern extremity of the mountain to where the Connecticut River cuts its way through the range at the foot of Mt. Nonnatuck. At this point the side of the mountain extends almost perpendicularly downward for about 300 feet and then makes a more sloping descent to the plain below. Only those whose heads are clear and limbs steady may venture to stand with safety on the edge of this cliff and gaze upon the rocks at the foot of the mountain, others must crawl on hands and knees to the verge of the precipice and view with awe the depths below. I cannot pass without making mention of the beauty of the landscapes as viewed from the summit of this cliff. Stretched out before the observer is a patch-work of meadows, groves, villages and heavy timber land; all interwoven with silvery streams, conspicuous among which are the Connecticut River to the north, and the Manhan River just beneath the eastern face of the mountain. Towns and villages are spread out as in panorama before the admiring eye—Northampton, Easthampton, Southampton, Westhampton, Leeds, Florence, Deerfield, Hatfield, Westfield, and others, all in plain view, while with a glass of moderate power the observer may if the weather be clear, catch a glimpse of the Green Mountain range far away in Vermont, and then directing it southward may descried buildings in the city of Hartford, Connecticut. All this without changing one's station, and even more extensive views may be gained from certain points on the moun-

tain that command a view of both eastern and western slopes. But our limited space would fail us ere one half the beauties of this scene were told—volumes might be written on the subject and yet to appreciate its loveliness one must see it for himself. The writer has pitched his camp on higher mountains, and enjoyed the grandest of mountain passes, ravines and plateaus in the far West, but it is always with a feeling of special pleasure that he returns to this glorious natural observatory.

The nest from which the eggs were taken was satisfactorily located a few days previous on a shelf of this cliff about 90 feet from the summit, and an ineffectual attempt made to reach it by scaling the side of the mountain. We carried with us 250 feet of good rope and some heavy ducking to place on the sharp ledge at the top of the cliff and thus protect the rope from its gnawing edge. The rope was snubbed around the base of a $2\frac{1}{2}$ inch birch sapling—the largest tree available at that point on the summit—and Mr. Carrier was thus lowered over the cliff. The day was very unfavorable for cliff-climbing. A breeze plays over the summit of Mt. Tom even on the hottest summer days when not a leaf stirs in the valleys, but on the day in question this breeze was increased to a gale and during the time the eggs were being taken two fierce snow-squalls were encountered. The ledge was, however, reached in due course of time, the eggs secured, and both man and eggs drawn to the summit. The eggs, which are beauties, present no special deviation from the usual type of Duck Hawk's eggs. They are now in the Smithsonian Institution at Washington, D. C.

J. HOBART EGBERT, M. D., Ph. D.

Remarkable Flight of Geese.

A flock of Canada Geese passed over here on April 20th which in numbers

will doubtless rival the pigeon flights of several years ago.

Large numbers of geese began flying over in scattering flocks about eleven p. m. and by midnight there was a solid mass of geese more than a mile wide passing over the city. They were flying very low and made so much noise that all other sounds were completely drowned out by the steady roar of their wings. They continued to fly until nearly seven in the morning and so thick was this curtain of flying geese that the approach of day was unheeded and the early street cars were forced to carry headlights on account of the darkness. Immense numbers of the birds were killed and the amount of feathers found in some places was sufficient to make new feather beds.

This is the greatest flight of geese ever known in this region and what should have caused it is a problem now agitating a large portion of our citizens.

O. E. CROOKER.
Helena, Montana.

A Trip for Loon's Eggs.

BY ABOUT 42 DEGREES NORTH LATITUDE.

I have collected eggs from many species of nests and in many sections of the country, but I doubt if there is a class of takes among them all, which equals the capture of a full set of Loon's eggs. The surroundings have perhaps a good deal to do with the undertaking, together with the glorious spring weather. I do not pretend to give a just reason for this preference, but merely say that it is so.

Twelve eggs, in six sets, are the most that I have taken in a season, while some springs I have been able to secure only one set, and this too, only after many severe disappointments and much uneventful travel. This falling off, was not the fault of the birds, as they con-

tinned to breed in the same situations, but was from the fact that I was too late in my rounds, and some other collectors had stolen a march on me.

One year, I think it was 1884, May 24th and 25th, I took four sets in the two days trip; walking fully forty-four miles and rowing and paddling ten or fifteen more. I have often slept out on these trips, though I have usually timed myself so as to sleep at the house of a friendly farmer.

One year 1885, two of us took the rounds with a horse, and the result was six eggs. This was so pleasant a trip that I have thought of offering an account of it to your readers—and will in my narration give you the general details of our outing, as we may call it, for we do not get out very often, and, therefore, when we go collecting, we always take our fish poles, or rods, as they call them now days.

Perhaps you will not feel like publishing this squib, Mr. Editor, after reading it, as it is too much like a fishing excursion to suit the make up of your critical magazine. However, if you will allow me to explain, I will say there are two reasons for this departure. First—it will be plain to all that there is a good opportunity, as instanced in this trip, to combine the collecting fad, together with work for the note book, with a successful fishing outing, and good time generally. Secondly there has been so much of a sameness in the large majority of articles in your publication of late, that I am inclined to offer a protest—and perhaps thereby stimulate your large concourse of writers to further strive toward that degree of excellence, which you are bound to achieve in the long run.

We started at 4 a. m., May 20th, with our old buggy loaded to the gunwale fore and aft. Tent, chuck, fixins, rods, blankets and all the rest of the duffle which constitutes a proper short camping trip outfit—neither forgetting a bag

of oats for Kit, and a box of beautiful, lively, red angle worms for the hungry fish.

Reached Gull Lake, twelve miles distant, before seven o'clock and rowed about the likely spots, but never had a sight of a Loon. The birds have left this grand lake or, at least do not appear there regularly. Too many collectors reach this water and the birds have left for other quarters to nest.

Secured a number of eggs of marsh birds, such as sets of Carolina Rail, Long-billed Wrens, etc. Then hitched up and visited successively Indian and Gilkey lakes and several large ponds in an adjoining county, but without success, so far as the desired articles were concerned, although we caught a nice lot of calico bass.

Finally reached Crooked Lake, where we gave the mare another rest, and went on the water. We soon heard a Loon's weird, quavering utterance and not long after saw three birds in one-section of the water. This did not prove anything but it gave us hope, and, as my companion said 'the bail was opened.' Not an inapt term either when we consider the bubbling notes of the Loon as compared to the rippling bursts of the clarionette, as the band tunes up.

The birds often nest on small lakes, and feed on large ones, sometimes to quite a distance, so that we were never sure of finding a nest unless we visited all the lakes in the vicinity. We were sure of just one thing by the appearance of those Loons—viz, that there were two pairs of birds, at least visiting somewhere in that section.

We spent four hours and over hunting through the likely portions of the lake, but without success, although we took several sets of Gallinules and Rails eggs. Finally we discovered the nest in the usual situation, an old bog, out from the shore ten rods or more. The nest held nothing, and would not have been recognized as a nest unless

one was familiar with the appearance of the damp shiftless structure. Even our practical eyes could detect nothing which could prove that the slight hollow had held eggs as yet, but the chances were, that some one had been there before us.

Now, rather tired we pulled for shore, trolling on the way and landing a large black bass. We next struck out for Pleasant Lake, a beautiful sheet of clear water. A row of ten minutes from the wharf brought us to the bog where I had taken eggs the year previous, and three years before. We were not disappointed this trip, as the nest held two finely colored eggs with well defined specks, mostly at the larger end. The ground color was emphatically different from the general run of eggs, being of a greenish tinge quite unlike anything which I have ever seen. Still I think the same bird laid—them that laid on the bog before. I reasoned this way from the markings rather than from the ground color, as I have often had it demonstrated to me with the eggs of the Buteoes. The eggs, long and generally almost exactly elliptical lie side by side at about three-fifths of the length of the nest from the front. This is undoubtedly to accomodate the capacity of the old bird to properly incubate them. The bird having a long boat like body the abdomen is necessarily well back from a center.

Carefully blowing and packing our treasures which proved fresh, we next hustled over to Wall Lake, where we were to camp for the night. Pitching our little sheiter tent in a clump of trees near the lake shore, we soon had the frying pan sizzling and a grand display of beautifully browned bass laid out for hungry boys. We sat down to a repast, which though not served in style, at least answered the purpose. The manner in which the bacon and eggs, fried fish and coffee disappeared, was ample proof that tin plate

service was all that was required. The Loons kept up their quavering clatter and weird hullabaloo while we were at our repast, and Ralph became so rattled that he at last choked and had to stop eating. He claimed that he had choked on a bone, but I sincerely think he was so stupefied as to be unable to swallow another mouthful.

After supper, or as we called it our eight o'clock dinner, we made the horse O. K. for the night, and then my companion, who insisted that the Loons were mocking us, and during us to come on the lake, said that we must get one more set of eggs in order to sleep well. He went to a neighboring farm house and secured a boat, and though it was getting dark insisted on our going out.

We knew about where to go, and striking off just out from the reedy shore, not over a quarter of a mile was covered, when we had set of eggs number two in our hands. We saw the old Loon slide off of the eggs when we were twenty rods or more away. She kept about the spot, often coming within eight or ten rods of us and frequently uttering the weird quavering notes. This seemed to be the method of communication, call notes if we wish to term them so. The mate which we had not seen before in the gathering darkness, now appeared and the pair conversed in Loon language, driving about us and evidently anxious for our departure.

Ralph fired at the birds several times not with any idea of hitting them, but as he said just to keep his hand in at missing them. It is perfectly idle to shoot at a Loon or diver of any kind when they are aware of your presence. They can dive at the flash every time and get away. The only means of securing one is to surround it which is extremely difficult, and while the alert bird is watching one gunner, a shot from another may possibly lay it low.

I have even seen a bird, to wise to fly, baffle a dozen shooters distributed about a mill pond, for two hours.

We rowed to a likely spot and anchored and fished for an hour for bull-heads, and at last went into camp with a good mess for breakfast. Then we sat near the camp fire and wrote up our notes for the day, keeping up a string of back-talk that would have convinced anyone listening outside of our circle, that we were deadly enemies. The Loons out on the lake continued to yell, holler or twitter, as the impulse seized them. There must have been five or six at least, but it did seem that there were twenty or more.

The common song is *cloo loo loo* but this is often varied to *ko a whee loo loo l-o-o-o*. Coming over the lake, the notes might almost be considered as the repinings of lost spirits, if such things could be. To a superstitious person, the Loon's song at night appears the very incubation of all that is mysterious and frightful. It would not be a difficult matter to drive a nervous tenderfoot crazy with fear, by concocting some horrible yarn to fit the dread inspiring notes. Even yet, familiar as I am with the weird clatter and jabbering—the notes often produce momentary chills down my back. But, nevertheless, the song, gutteral chucklings and quavers, are very pleasing to me, and I do not know of another bird which possesses notes, which are as alluring to my ears, both from their oddity as well as the spirit of mystery surrounding them as those of the laughing, crazy Loon.

Next morning I was awakened by the following pleasantry from my companion:—"Get up you miserable Egg-hog. Time for chuck."

"You're a'nother."

"Hurry up. Let's eat and then scoop 'nother set. Didn't the Loons holler in the night."

In ten minutes the coffee was boiling,

and inside of a quarter of an hour more we were again on the lake on the lookout for Great Northern Diver's eggs. We took several sets of Rails and other eggs, but never had sight of another Loon, or eggs. After fishing over a good share of the lake, constantly on the lookout for Loons we finally gave it up and prepared the horse for another skip of a few miles.

At Shelp Lake, which is merely a big pond of a half mile in length, we took a set of two dark colored eggs. The nest was only just outside of the pond lily pods and not over three rods from shore. The nest was situated so that it could be seen from afar, and the eggs could be distinguished at quite fifty yards. This is generally the case and I have more than once been able to distinguish the eggs at fully one hundred yards, so nearly level is the surface of the structure.

We next visited Pine Lake but without success in anything but fish. From here we made a jump of seven miles to the west shore of Gunn lake where we busied ourselves the remainder of the day with the land and water birds and in fishing.

We camped on a point of land convenient for our purpose. The next morning we started to take in the whole lake but had to give up on account of the large expanse of the sheet of water. We found no more Loon's nests but were successful in taking a great many shore birds and other eggs and also had fair luck with the fish, and took home a good string of small mouth black bass. Also shot a number of birds for the collection.

The one point against a trip of this kind is the expense of boat hire, as at most every lake we were docked a quarter. My friend now has a means of evading this outlay by carrying his canvass boat, which occupies a small space and weighs but thirty pounds.

SCENES FROM THE LIFE OF ALEXANDER WILSON.**Wilson and Bartram the Naturalist.****G. VROOMAN SMITH.****III.**

John Bartram, whose career ended in 1777, and who established the first botanic garden in America, was pronounced by Linnaeus to be "the greatest self-taught botanist in the world." William, his son inherited the father's vast capabilities and love for Botany, and became at his death proprietor of the Botanical Gardens at Gray's Ferry on the Schuylkill. He, like his father did not confine his studies exclusively to Botany, but his tastes were directed along the entire line of natural history. Before Wilson conceived the plan for his American Ornithology, Bartram was without doubt better acquainted with the birds of this country than any other person living. In fact he had published the most comprehensive list of American birds ever written.

Wilson's School was in close proximity to the Botanical Gardens of Bartram. The benign, congenial disposition of the owner early led Wilson to become a frequent visitor at the garden, and he contracted an affectionate, enduring intimacy with the venerable naturalist. The two friends conversed and argued about topics relating to nature, and gradually Wilson became drawn into its fascinating meshes. He often accompanied the Botanist on botanizing expeditions in the vicinity, and became acquainted with the natural objects of that section and enjoyed hearing them explained by a master of the science. Always a worshipper of the beauties of nature, his inborn tastes were kindly fostered in the society and by the instruction of his newly made acquaintance.

Confined to the close air and weary, monotonous routine of a village school his nerves and active spirits were beginning to lose their power. He was often given over to melancholy, depression and depondency; for his mind was constantly working and brooding over dim and indefinite plans and systems for the future; and this tendency was greatly increased by his devotion to poetry and the flute, in which he spent most of his leisure time. His health was rapidly becoming impaired by severe mental exertion and studying late at night by a dim candle-light.

Mr. Bartram's library contained but few works on the subject of Natural History. The writings of Edwards and Catesby were sufficient to give him an idea of science, and to direct him in making observations for himself.

One of his first acquisitions in the science was to discover the imperfections of books on the subject of the birds of this country by an actual comparison with the living objects themselves. While Mr. Bartram possessed invaluable taste and judgement to assist and advise him in his new pursuit; yet his ideas concerning the torpidity of swallows and the night hawk and whip-poor-will being one and the same species, were wholly in accord with the prevailing opinion of the time. To Wilson, the opinion that swallows, the gay harbingers of Spring should at the approach of cold weather take up their abode at the bottom of mill-ponds and rivers with the turtles and frogs, seemed like an enormous absurdity. Though Bartram shared the popular opinion, as Linnaeus did, and even as Aristotle in remote times believed in the submersion of swallows, Wilson was determined to prove, if possible the contrary to himself and to the world by actual impartial observation. He examined mill-ponds when they were drained in the Autumn; saw a multitude of trees cut down in which chimney swifts had nested for

years, visited the salt-petre-workers in the Barrens of Kentucky, where it was believed they resorted to in winter; excavated hundreds of holes of bank swallows, and various other retreats; but failed to find a single incident to testify that swallows did actually assume a torpid condition. He laid before Bartram the results of his careful research, which thoroughly convinced him that his idea was erroneous.

That peculiarly colored bird perched on yonder low roof, uttering those shrill notes "whip-poor-will," which comes to our ears through the soft air of this pleasant June evening, was almost universally regarded at the time Wilson began his ornithological career, as the same species of bird that you see swiftly flying there above; now to one side now to the other and uttering its strange, characteristic notes as it quickly turns, at the same time enabling us to dimly see through the slowly fading twilight the white spots of its wings.

The whip-poor-will and night-hawk greatly interested the young Ornithologist. He resolved to make a thorough examination, as he was accustomed to do of the two birds. We may state right here that Wilson's success as an Ornithologist principally lay in his minute observations. No popular idea or opinion was accepted by him as granted. His great work is based on pure and reliable personal observation. Instead of considering the point as regards the whip-poor-will and night-hawk as established, he shot fifteen night-hawks. Nine males and six females. Two were shot as they rose from their eggs, which were laid on the bare ground. All these he very carefully examined and dissected. The same way he treated the whip-poor-will, examining their eggs in every case. The result of his research was that he observed the night-hawk's wings to extend beyond the tail and ornamented with white spots on the under side; while the whip-poor-will's

wings were much shorter and devoid of such spots. The bristles of the whip-poor-will's mouth were absent in the night-hawk, and the bill of the former much longer than the latter. Thus after long and patient study he satisfied himself and convinced his friend Bartram that they were two distinct species.

Although Bartram cherished many antiquated ideas concerning birds, still he greatly assisted Wilson in his new vocation, and his work was afterwards enriched by many of his observations. We owe to Bartram the honor of being the counsellor and adviser in nearly all of Wilson's projects. When barriers arose which were likely to oppose the progress of his plans he freely stated the difficulties to his friend, who speedily devised the needed remedy.

The following communication from the pen of Wilson to his friend in reference to some pencil sketches he desires to have criticized expresses his exact sentiments and attitude towards him.— "Criticize these, my dear friend, without fear of offending me—this will instruct, but not discourage me." For there is not among all our naturalists, one who knows so well what they are, and how they ought to be represented. In the meantime, accept my best wishes for your happiness—wishes as sincere as ever one human being breathed for another. To your advice and encouraging encomiums, I am indebted for these few specimens, and for all that will follow. They may yet tell posterity that I was honoured with your friendship, and that to your inspiration they owe their existence."

Floridan Races.

Florida, while not abounding in new species for a northern collector, is however, exceedingly rich in climatic varieties and geographical races, which, during two seasons collecting there have interested me as much if not more

than the species, or even genera, which I had not before met with.

Not all the varieties in southern birds can be mentioned in this article; they all differ in about the same way—smaller and darker seems to be the rule, broken however in one or two cases as with the size of the Florida Wren *F. L. miamensis*, a variety of the Great Carolina bird, *tudoricianus*, which is, if anything slightly larger, measuring about 6 in. in length, 7.75 in extent, and wing from 2.45 to 2.70; the bill is also noticeably larger. As with the latter part of the above rule, though, *miamensis* is darker and richer in its color. The eggs seem to average about the same as those of the stock species, a set of five measuring .73-.75 by .52-.56.

The Southern Hairy Woodpecker is found commonly throughout the pine flat-woods, but does not seem to differ much from our birds except in size; 8.00 to 8.75 in length by 14.75 extent. Perhaps if there is any difference in color this southern form is a little darker, especially noticed below.

The Blue Jay and Crow, as representatives of *Corvidae*, differ in about the same way, smaller, and the Jay lacking some of the white of our birds on the wing and tail, and having a smaller crest, as noticed by Coues in his popular "Key." A specimen taken in northern Florida, where they were not at all common and rather hard to get with small shot, measured 10.95 x 15.40x4.80. Bill 1.15. The Towhee Bunting of Florida *P. lallenii* differ in the same way as the Blue Jay together with the white iris.

One of the most striking of the varieties to a Wisconsin collector, is the case of the Bob-white *C. v. floridanus*, which altho' perhaps not differing so very much from the quail of the other southern states, is a very different bird in color and size from the average Wisconsin specimen. The first thing noticed, after the smaller size, is the richness

and darkness of the coloring, the breast in most specimens looking almost blackish at a little distance and the black sometimes almost entirely replacing the brownish breast band. The black bars of the belly also seem to begin nearer the collar and continue in a sort of blur to the lower breast, before showing a distinct and continued white space-mark. Individual specimens, however, differ very much in the markings of the nuder parts.

The bill in all specimens taken, except perhaps one or two, was entirely jet-black, and the white superciliary line was usually divided at the crown by the black of the head, which extended in most specimens all over the back of the head, and neck, giving all the white markings a very sharp and distinct look. The whole back is also a decided darker and richer chestnut and black, the secondaries and their coverts showing very broad black bars. Altogether the quail of the south are much prettier birds than our own beautiful, but rapidly disappearing Bob-whites of the north. Measurements of males ran from 9.10 to 9.40 in. in length by about 14.50 to 14.55 extent, and wing from 4.27 to 4.50.

Among Raptore probably the most distinct variations occur among the owls. Of common northern owls the Barred and Screech are both represented by equally good geographical races. The Barred Owl of Florida is a much darker bird, especially on the back and head, and perhaps on the breast, when compared side by side than our own inhabitant of the hollow tree. His toes are not so heavily feathered, in fact some specimens show barely a sign of a bristle on them. He seems to be of the same size as the northern resident. The little Screech owl, however, is decidedly smaller measuring from 8.25 to 8.75 by 20.25 to 21.50 by 5.50 to 5.75, thus averaging much smaller than *asiatica*. The smallest specimens are those of

the erythrismal phase, which is the commonest there, although "mottled owls" are frequent. I was not fortunate enough to meet with the Florida Burrowing Owl.

The resident Meadow Larks and Red-winged Blackbirds were particularly small on the average, although very large specimens of the former were sometimes obtained. The smaller ones averaged about $8.55 \times 13.70 \times 4.00$. Northern larks vary much, however in size and brightness of the yellow breast.

N. HOLLISTER.
Delavan, Wis.

The Embryology of a Bird.

It is evident at once that a subject upon which alone whole volumes have been written, can receive but the merest outline in a sketch like the present, and I can only hope that a few brief facts, stated in the simplest language may be of interest to those, who, while not caring to enter deeply into the intricate details, would still wish to know the principle step in that mysterious process of development, which transforms the inanimate egg into the living, breathing chick.

And first a few words upon the anatomy of the unincubated egg, for its two divisions of White and Yolk are not quite so structureless as they at first appear. The White may be easily disposed of since it serves merely as a store of nutriment for the growing chick without taking any *active* share in its formation. Confining our attention then to the Yolk we observe, first that it is surrounded by a very thin, structureless, but important sheath, called the *Vitelline Membrane* and from each end of this membrane extending through the white to the ends of the egg, passes a delicate cord, which while aiding to hold the yolk in place allows it to *rotate*. The object of this

careful arrangement is seen directly when we find that upon the yolk, just beneath the Vitelline Membrane lies a small mass of alluminous substance called the *Cicatricula* which is alone the vital and essential portion of the whole egg, and it is for the purpose of keeping this important structure always highest, where it may receive the greatest amount of heat, that rotation of the yolk is permitted.

What now is the first change occurring as *incubation* begins? The *cicatricula* divides into two parts, each of these immediately into two more and this continues to be repeated until there remains but a collection of globular, microscopic bodies, all exactly similar, known as cells. This is called *Segmentation*, a process which, generally speaking, occurs in the ovum (or "egg") of every animal from that of a sponge to those of mammals themselves. Segmentation being complete, fluid collects between the cells, which at the same time spread themselves out, disc like beneath the Vitelline Membrane. This disc is the *Blastoderm* and is the first rudiment of the embryo although composed of cells which, as we have said, are precisely alike, they will finally change, each to its special nature. This process is known as *Differentiation*, one of the fundamental facts in life which science is never likely to explain. The Blastoderm now begins to curl downwards and inwards at sides and ends until they meet when they unite and form a sac entirely closed except a communication below with the remaining larger portion of the yolk, through which the latter can be absorbed as needed for growth. Meanwhile the cells on the upper surface of the Blastoderm on what is to be the back of the embryo, are very active. A *groove* forms in its long axis, the cells on either side heap up, arch over the groove, unite and form a hollow tube, slightly larger at one end, This is the

Cerebro Spinal Cord and represents the brain and spinal cord. We have so far traced the formation of an oblong sac above which runs a hollow canal, but another step has been also going on which is somewhat more complex. The Blastoderm has split into two layers thus giving us really two sacs, one within the other and quite separate except beneath the *Cerebro Spinal Cord* where the Blastoderm remains undivided through life. From the external sac, the body walls, the skeleton, the limbs, the heart and blood are formed; from the internal, the intestines and internal organs. Four bud-like processes grow out from the external sac. These become the four limbs. The internal sac grows longer, much longer than the others within which it coils, while from its outgrowths, or buds, form the *Liver* and *Lungs*. The large end of the *Cerebro Spinal Canal* increases in size by thickening of its walls and the brain takes definite shape. So far we have no openings to or from the intestinal canal, but at each end the walls of the two sacs grow to each other and unite, the septum between them becomes absorbed and the mouth and arms remain. Notice that neither of these openings communicates with the space between the sacs (that is between the intestines and the walls of the abdomen) which is entirely closed. The eyes are formed in a curious manner by an ingrowth from the skin meeting an outgrowth from the hair.

By this time our embryo is decidedly birdlike in appearance although still occupying but a small part of its shell and having the large unabsorbed yolk sac attached to its abdomen. From this point its history is more a matter of "growth" than transformation except in its development of special organs, a description of which would be far too complicated for an outline such as this. There remains, however, a structure which must be mentioned,

and this is the membrane which envelops the embryo and which occasionally causes oölogists so much annoyance by clinging to the inside of the shell of incubated eggs. Its structure is extremely complex and it must suffice to say that it is formed of three layers, the outer being the *Vitelline Membrane*. Beneath this is a delicate layer formed by an outgrowth from the external sac, which has budded out and grown entirely around the chick. This is the *Amnion*, its purpose being chiefly protective and hence more important in mammals. The last or innermost layer is a somewhat similar outgrowth from the inner sac but its purpose is very different, for the *Allantois* serves the unborn chick as a breathing apparatus, absorbing oxygen and giving off waste products through the porous shell. When the bird leaves the shell its lungs of course become active, and the allantois is thrown off with the rest of the membrane. As mentioned before these structures are of great importance and of early formation, commencing before the edges of the Blastoderm come near uniting, although for simplicities sake I have referred to them as outgrowths of the two "sacs". As an aid in explaining the Amnion and Allantois I would suggest their mental comparison to the empty sleeves of a man's coat and shirt respectively, without the lower openings, and it can I think readily be seen how they may extend and cover the entire body.

THEODORE W. RICHARDS,
Washington, D. C.

THE WORLDS FAIR.

BY OUR SPECIAL CORRESPONDENT.

There has been a great deal written about the Columbian Exposition, and the newspapers are full of a general description of the sights and principle features. But the naturalists of our

land derive very little information or pleasure from these reports, as newspaper columns contain but slight reference to the subject in which we are most interested. To meet the requirements of their readers, the larger majority of periodicals and magazines devoted to specialists, have secured special correspondents to write up the Fair in their provinces, and this effort on the part of enterprising publications, cannot fail to receive the approbation of all who are interested.

The OÖLOGIST is never behind in an effort to keep abreast of the times, and ever anxious to secure reliable notes on all pertaining to Birds, eggs and allied subjects, has placed a regular correspondent in charge of 'World's Fair Notes.' This department will be presented from month to month, and a general review be given to the readers. To those who are unable to attend the Fair, this series of articles will certainly prove acceptable, while to those who attend the Fair at a later date, the notes may be of some assistance as a guide; and as a record of the past, the sketch cannot fail to receive pleasing memories of the greatest World's Fair that has thus far been opened.

To begin with, we will discuss the prospects in regard to board and lodging. There is not a particle of doubt in my mind, but that ample accommodations may be found for all the visitors to the windy city, even in the busiest months. Any able-bodied boy or man can find lodging within a mile of the grounds at fifty cents a night, and good meals at twenty-five cents. If meals are high near the grounds then take a cable car to the main part of the city, where there are dozens of places which set out fair meals, *European plan, at from twenty to forty cents, according to your liking and capacity. A meal

good enough for me, can be had for twenty cents, consisting of meat, potatoes, bread, butter and coffee. It is fair to consider this sufficient for any man or boy who wants to see the Fair cheaply. For lunch on the grounds, you can buy a sandwich, or some doughnuts. These can be bought for five or ten cents outside the grounds and carried in your pocket. Nothing should be bought on the grounds, as everything is high-priced, and to a person going on the cheap, unnecessary outlay is a serious matter. What is more, the trouble of taking care of extras is always a serious inconvenience and one should always go as light as possible. One's baggage should consist, at most, of a light valise, containing a change or so of linen, collars, cuffs, socks etc. These, in proportion to the length of one's stay. This valise may be left at the baggage room of any of the state buildings where you register or at your lodging place, if you have a regular one. It is best to go untrammelled as possible. At the end of the visit, one can purchase those articles which appeal to our desires, as collectors and naturalists. I expect to have several lodging places before I am through with the Fair, in fact I rarely sleep twice in the same bed. What is the difference to a person where one sleeps. I come to the Fair to see the show, and not to put on style, or 'ent a figure.' At the Centennial at Philadelphia in '76, I did not sleep two consecutive times in the same house, and never twice in the same bed, yet I 'took in' the whole exhibition, and took notes on each country represented.

To my way of thinking the naturalist who attends the Fair should constantly take notes for future reference. One may think that all points of interest can be remembered, but a great error is made in leaving everything to memory without a proper reminder.

*European Plan—means ask for what you want, as little or much as you choose; a full meal or a piece of pie.

If one takes notes on points of merit then at any future time, we may turn to the remarks on a particular nation, or exhibit and there recall all the features of interest. As a boy I attended the Centennial exposition and followed this plan, and I have to-day notes on each of the many nations, and can refer to it instantly. It may be that a few outsiders will read this article; if so, it will not come amiss if the general advice is taken as to notes, for anyone attending this grandest of aggregations, cannot fail to reap benefits by a proper use of pencil and note book.

To return to the matter of expenses, a subject in which many of my readers are interested. The following schedule of prices will give an idea of the daily average of a sight-seer's expenses who is limited as to means:

Lodging.....	.50
Breakfast.....	.20
Gate entrance.....	.50
Incidentals, street car fare etc.....	.20
Lunch bought outside of grounds.....	.10
Supper.....	.25
<hr/>	
	\$ 1.75

At these figures a boy can spend a week, that is Monday to Friday inclusive, five days, riding to and from on Sunday and Friday nights, for \$8.75 exclusive of railroad fare. Moreover, as can easily be proven, if a man wants to exert himself, this figure per day may be cut down quite an amount. For instance, street car fare may be lopped off, if a boy wants to walk and save funds. And, too, a plentiful supply of staple provision may be brought from home and kept in a satchel. Crackers, dried beef and bologna, together with hard boiled eggs and cheese keep well, and are filling and suitable, if not delicacies. Remember you are going to absorb information and not to fill your stomach.

There are thousands of persons who will attend the Columbian Exposition who will "blow in" a lot of money,

Many of them can afford it but there are a great many who can't, who will try to cut a swell; and then in the end they will not have a better time than you, and ten to one will not learn half as much as the boy with the note book. The following will give a rough idea of the expense of going to the Fair in style.

Hotel per day.....	\$ 5.00
Taxicab to and from ground.....	3.00
Lunch in grounds.....	2.00
Theatre in evening.....	2.00
Incidentals.....	2.00

Per day total.....\$14.00

Thousands will spend this sum daily aside from the figure of railroad fare, but they cannot learn any more than is possible for you on \$1.75 a day.

Now boys I want you all to come to the Fair, if it is possible, and I take this means of asking your parents to let you come, and to assist you to visit Chicago in 1893. Self-reliant boys will find some means of paying expenses, and there are very few who live within one or two hundred miles of the Fair who will fail to visit it. In 1876 I worked all summer in order to visit the Centennial, and took my hard knocks in the harvest field and at other kinds of hard work, in order to accomplish my object and I have never been sorry. At the Centennial I necessarily lived cheaply, for I had about 2,000 miles of railroad fare to pay going and coming, and so I had to cut down expenses. I secured lodgings at Philadelphia at 25 cents a night, and to this day I have never been sorry that I went.

Some may think that this article is written up to advertise the Fair—and they are right. But in no sense is it intended to puff any particular institution or department. I have no axes to grind, and have merely written this for

These lodgings were cheap and poor enough but answered the purpose. Equally poor and cheap lodgings can be found in Chicago.

my young readers, to let them know how they can manage to see the World's Fair at about \$10 a week or less.

Many exhibits are just being placed in shape and the best season to visit the Fair is still to come. There are a great many points I would like to dwell upon, and many exhibits I would be pleased to describe, but there is yet ample time for full descriptions and in the following articles it will be our endeavor to refer to all points of interest to ornithologists and oöologists.

Most of my readers are now at school and will not attend the exposition until the summer vacation, and therefore, probably not until July or August. In the mean time it is well to get a general idea of what you are most anxious to see, and in order to follow this out, it is perhaps best after registering at your State Building to call at the exhibit of F. H. Lattin & Co.

SPECIAL.

Data Blanks.

To the genuine student of oölogy a set of birds eggs without data is of about as much value as so many marbles. The well filled data blank constitutes the history of a set and upon its completeness and correctness depends largely the value of the specimens. A detailed description of nest and nesting site adds much to the value of specimens and to this end data blanks having plenty of room for description of nest should be selected.

B. O. Longyear,
Mason,
Mich.

We call the attention of our readers to the mistake in one of our ads. last month. It read "Eureka Silver Plating Composure" and should have been "Eureka Silver Plating Compound." We would advise our friends to try it.

A Few More Hints on Scientific Osteology.

I have read with interest the two articles on Osteology, which have been published in the recent OÖLOGISTS, and think I can add a little to them.

The latest writer seems to think it very important to allow the rough skeleton to dry and then soak it till the flesh is soft and then carefully pick away the flesh. I have seen very good specimens prepared by cleaning the skeleton as carefully as possible, leaving the sinews so as to hold its joints, and then allowing the skeleton to dry. Then take the skeleton and hold it in steam, escaping from some vessel containing boiling water, for a few moments. Then the dry flesh can be scraped away very easily and the sinews not injured, as they differ in color and need not be confused.

Then the skeleton should be soaked in "jarveile water" (the compound of chloride of lime and soda, mentioned by the previous writer), then it can be mounted, and if placed in strong sunlight for a few days will bleach very thoroughly.

There are a few bones that the amateur is likely to destroy or throw away. At the joint of the wing corresponding to the wrist joint is a small spur or thumb. This should remain attached to the bone.

In the neck, at the base of the tongue, there is a bone, the hyoid, which should be saved and attached in its proper position, to the bleached skeleton. It is roughly V-shaped.

The skulls of Owls and all large birds should be handled carefully when being cleaned so as not to crush the nasal and other honey-combed bones.

W. C. HALL.

[A skeleton can be cleaned much quicker by allowing flesh to dry on the bones before scraping, as larger pieces can be removed at a time.—OST. ED. OF OÖLOGIST.]

THE OÖLOGIST.

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OÖLOGY AND ORNITHOLOGY.

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FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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* * Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

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Items of Interest.

We are unable to print many valuable articles in full, hence we give the following brief extracts from those of greatest interest.

Mr. Harry Smith of Michigan, sends notes on the Golden-winged Warbler. The nest was found in a fence corner

in a small bush 1 ft. up. It was composed of large Oak Leaves on the outside, lined with grasses and had a wreath of grapevine bark on the top. It contained four eggs, the background being white, with spots of black and brown on the large end. The bird did not seem to mind our approach and we nearly caught it on the nest.

A curious incident is related by M. G. Van de Water, of New York. He states on April 27th, this year, a pair of Phoebe's built a nest in a building near their house. It was composed of the usual material. They had only got this nest well under way when a second one was started beside the first. Both nests were fully completed on May 6th. There was one egg in nest No. 1 on the 6th and on the 7th an egg was laid in nest No. 2. After that three more eggs were laid in nest No. 1. He states the nests were situated so that he could give them close observation, and only one pair of birds were to be found in the immediate vicinity.

A twice occupied nest of the Ruby-throated Hummingbird is recorded by Mr. Grier Campbell of N. J. A year ago he found the nest on a small branch of a maple about ten feet from the ground. On July 6th last year he again noticed the birds around the nest and on close examination discovered it was being re-built. On the 12th it was apparently fully finished and contained two eggs, which he took with the nest. He wishes to hear from others on this subject.

Mr. Wm. Brown of Wisconsin gives an account of "A Flock of Hummingbirds" which he saw last season. As he was picking his way through a particularly wet place, looking for botanical specimens, his attention was arrested by numerous Hummers and by a peculiar sound. Noticing a large patch

of "Jewel Weed" (*Impatiens Fulva*) several square rods in extent he walked to it and discovered it to be literally alive with Ruby throats. The plants which grew three to four feet high were literally covered with scores of the little creatures, their green coats glistening in the sun, like polished armor, while the sound of their wings, like the distant hum of machinery. Some seemed to be gathering honey while a great majority were chasing each other about, as if in a frolic, and a few were resting on the leaves. They seemed to be quite tame as he approached very close without their paying any attention.

We have a description of a collecting trip by H. D. Watts of California. The main finds were a set of Warbling Vireo 5 eggs. The nest was of lichens, strips of grapevine bark, and lined with hair, situated between two runners of a grapevine. A Rock Wrens nest made of small sticks and grasses and placed between two pipes which supply the city below with water. A Louisiana Tanager nest high up in an Alder tree. It was a frail structure, composed of roots, and the four blue, spotted eggs, were plainly seen from below. Four sets of Black-chinned and one of Costa's Hummingbird. He states in their locality the Costa's may be distinguished from the Black-chinned by being completely covered with lichens, while the Black-chinned looks like a small sponge. A Western Wool Pewee nest with three eggs. This was saddled on a large Sycamore limb 25 feet up.

Another collecting trip by H. L. Heathon of Kansas contains some interesting finds. The eggs were taken in a large canon, about two miles of which is covered with rocks, clumps of cottonwood trees, etc. The rocks were three to fifteen feet high, and form excellent places for Rock Wrens, Barn, Bank and Cliff Swallows, Says, Phoebe and

Vultures. He discovered a colony of Cliff Swallows under an overhanging rock, from which several clutches were taken, of from four to six eggs. 2nd a Hawks nest which he could not identify, found in a hole in a rock. 3rd. A nest of the Rock Wren, in a solitary rock, in a hole about four inches from the ground. This contained six eggs. 4th. A Says Pheebe, which was concealed on the top of a small rock under the edge of a large boulder. He took the set by standing on his pony's back. A number of other common finds, such as Black-throated Bunting, Baltimore Oriole, Night Hawk, etc.

APRIL CONTEST.

Eighty-Six Judges.

Prize winners and credits received by each were as follows:—

1. The Raptiores of Michigan. 387
2. A Criticism. 255.
3. Another California Trip. 201.
4. Wilson in Scotland. 90.
5. Band-tailed Pigeon. 83.

The following articles were awarded one year's subscription to the OÖLOGIST:— Illinois River Valley. 71.

A Tricolored Blackbird. 68.

A Collector's Gun. 54.

The Judges prizes were awarded as follows:

1. No. 62—Fred W. Parkhurst, Bath, N. Y. exact.
2. No. 42—O. F. Crooker, Madison, Wis. 1, 2, 3, 5, 4.
3. No. 26—Lorande G. Woodruff, New York City. 1, 3, 2, 4, 5.
4. No. 70—John B. Seymour, Clinton, N. Y. 1, 2, 3, 4, 6.
5. No. 21—Robert McPherson, North Adams, Mass. 1, 2, 3, 6, 4.

The following voted the same as the winner of the fifth prize, and were received here in the following order, but too late for any thing more substantial than an enrollment in our list of honor.

No. 25—Dana C. Gillett, N. Y.

No. 39—R. S. London, Michigan.

No. 43—A. R. Hutchinson, N. Y.

No. 76—A. D. Baylis, Iowa.

All prizes were mailed April 15th.

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Comprising together the most popular magazine, devoted to Birds, their Nests and Eggs, ever published.

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CONTENTS.

The following table of contents enumerates some of the principal articles in each issue. The "short articles" mentioned are one column or less in length and are all of great value to the student.

Not mentioned in the list of contents, each issue contains one or two pages of "items" or "brief notes", one column to two pages of exchange notices, and from three to eight pages of advertisements, besides a "query column" which occurs in many, although not all issues.

THE YOUNG OOLOGIST.

VOLUME I. Nos. 1, 2, 3, 4, 5, and 12 each contain 16 pages. Nos. 6, 7, 8, 9, and 10 each contain 20 pages. No. 11 contains 36 pages.

No. 1.—Instructions for Collecting Birds' Eggs; (3 pages); Coues' Key; Twenty-four short articles. May, '84.

No. 2.—Instructions for Collecting Birds' Eggs, concluded, (2 pages); Painted Buntings; Cala. Mottled Owl; List of Birds Found at Montreal; 24 short articles. June, '84.

No. 3.—Maine Items; Yellow-headed Blackbird; Orchard Oriole; The Slip System; Wilson's Thrush; Hand-book of Agassiz Association; 23 short articles. July, '84.

No. 4.—Screech Owl; Importance of Identification; A La. Herony; Cardinal Crosbeak; Eagle's Nest; How to Make and Use Bird Lime; 14 short articles. Aug., '84.

No. 5.—Bird-nesting—To Collect Scientifically, (3 pages); Cala. Birds; From Wyoming; 22 short articles. Sept., '84.

No. 6.—Bobolink, (2½ pages); Sea Birds of Maine; Egging in Cala. Swamp; Old "Put" and the Bird's Nest; List of Wisconsin Birds; 12 short articles. Oct., '84.

No. 7.—Bronzed Grackle; Singular Duel; Fish Hawk; Spurred Towhee and Least Tit; Old "Put" and the Bird's Nest; Bird Island; 14 short articles. Nov., '84.

No. 8.—The Alligator; Collecting in Marshes; Woodcock; "Our Birds in Their Haunts"; Iowa Notes; Redstart; Summer Redbird; 18 short articles. Dec., '84.

No. 9.—Baltimore Oriole; Texas Jottings; Sapsuckers; Barn Owl; American Ornithologists' Union, (3 pages); How to Handle a Gun; Black-capped Titmouse; Egg of the Moa. Jan.

No. 10.—Winter Wren; Cala. Duck Hunting; Screech Owl; Davie's Egg Check List; Peacock with Queer Tastes; White-bellied Nut-hatch; Blue Jays; Spotted Robin Eggs; 8 short articles. Feb., '85.

No. 11.—Bank Swallow; English Sparrows; Study of Birds; Gt. Horned Owl; Yellow-billed Cuckoo; Gambel's Quail; Conn. Notes; Intelligence of the Oriole; Yellow-breast Chat; Maryland Yellow-throat; White-Rumped Shrike; List of Pacific Coast Birds; Knights of Audubon; Sample Data Blanks, (4 pages); 32 short articles. March, '85.

No. 12.—Completes Vol. I. Title pages for binding, with complete and exhaustive index, (8 pages.) April, '85.

VOLUME II. consists of but two numbers. Each contains 32 pages.

No. 13.—Bartram's Gardens; South Carolina Observations, (6 pages); Scientific Names; Gt. Horned Owl; Bank Swallows; Knights of Audubon; Hummingbird; R. I. Notes; Texas Jottings; 30 short articles. May, '85.

No. 14.—American Crossbill; Audubon's Birds of America; Illinois Notes; Destruction of Birds; Cuckoos; Cala. notes; Wrens on the Warpath; Golden-winged Warbler; Fox Sparrow; Our Winter Birds; Snipe Creek; Red-head; Wisconsin Jottings; Burrowing Owl, etc.; A Florida Trip; Horned Lark; Queer Homes and Nesting sites; Brave Bird; Ferruginous Rough Leg; Sparrows; Pigmy Nuthatch; 26 short articles. June, '85.

THE OOLOGIST.

Volumes III. and IV. are Bi-Monthly. The remaining volumes are Monthly.

VOLUME III. each issue averages 12 pages. No. 15.—Full page Frontispiece.—*American Water Ouzels and Nest*; Chester Island and the Marsh Wrens; Birds of Cortland Co., N. Y., (4½ pages); A Cheap Cabinet; Nest of the Black-and-white Creeper; Summer Birds about Washington, D. C.; Davie's Nests and Eggs of N. A. Birds; Water Blowpipe; 5 Short Articles. Jan. & Feb., '85.

No. 16.—Vagary of a Collector (Great Horned Owl, Climbing Strap); A Hunt for Tern Eggs; Birds of Cortland Co., N. Y.; Notes from North Carolina; Whip-Poor-Will; Nest of the Brown Creeper; Whip-billed Cuckoo Depositing Eggs in a Yellow-billed Cuckoo's Nest; Cannibalism of the Red-headed Woodpecker; 23 short articles. March & April, '85.

No. 17.—History of a Bird-Box; Tree Sparrow; Nests of the Green Heron; Bird Notes from Iowa; A Difficult Job after a Red-tailed Hawk's Nest; Review of the Check-Lists of N. A. Birds, with special Reference to the new A. O. U. List (3 pages); The State of Maine as a Field for the Ornithologist; 16 short articles. May & June, '85.

No. 18.—My first White Crane's Nest; Spring Notes; Notes from Chester County, Pa.; Turkey Buzzards; How to Make a Cabinet; Chewink Nests in a Tree; A Cabinet for a large Collection; 13 short articles. Jy. & Aug., '85.

No. 19.—Collecting on Long Island; Chimney Swift; A Day with the Loons; Illinois Bird Notes; Marsh Wrens; A Plucky Wood Pewee;

THE OOLOGIST.

- Minnesota Notes; Yates County (N. Y.) Notes; 8 short articles. Sept. to Nov., '86.
- No. 20.—*Completes Volume II.* Title pages for binding, with complete and exhaustive Index of Volumes II. and III. Dec., '86.
- VOLUME IV.** Each issue averages 12 pages.
- No. 21.—Birds of Chester County, Penn. (10 pages); Chestnut-sided Warbler; Massachusetts Letter; Bills of Birds; 3 short articles.
- No. 22.—Notes from Spoon River Region, Illinois; Peculiarities of the Ruby-throated Hummingbird; Purple Gallinule; How to Collect; Bird Surgery; Rufous-vented and Bendire's Thrashers and Canon Towhee; Newsy Items; Notes from College Hill, Ohio; Nesting of our Swallows; Notes from Sullivan Co., N. Y.; Blue-gray Gnatcatcher; Notes from Connecticut; Fidelity of the Song Sparrow; 13 short articles. March to May, '87.
- Nos. 23-24. Combined number.—Tour in the Woods at Fort Washington, Pa.; National Museum (Department of Birds, Nest and Eggs); Beaver County, Pa. Notes; Black-capped Chickadee; Hawking; Agassiz Association and its Work; Crow Roosts of New Jersey; Swainson's Warbler; Destroy the Cowbird; Trail's and Acadian Flycatchers; 7 short articles. June to Sept., '87.
- Nos. 25-26. Combined number.—Gannet; White Pelican; Black-capped Chickadee; Mockingbird; Late Collecting; Yellow-breasted Flycatcher; 5 short articles. Oct. to Dec., '87.
- VOLUME V.** 16 pages each issue.
- No. 27.—Brown Thrasher; Bald Eagle: Shooting a Golden Eagle; Florida Jottings; Destructive Nesting (English Sparrow); Arctic Terns; Notes from Lincoln County, Maine; Acadian Flycatcher; Red-shafted Flicker; 14 short articles. Jan., '88.
- No. 28.—Title pages for binding, with complete and exhaustive Index of Volume IV.; Egg of *Aepyornis Maximus*, the Colossal Bird of Madagascar (6½ pages); Fish Crow. Feb., '88.
- No. 29.—*Icterus spurius*; Water Blowpipe; Cardinal Grosbeak; Kansas Notes; A Moonlight Trip; Among the Coots on St. Clair Flats; Brown Thrush in Confinement; 9 short articles. March, '88.
- No. 30.—Boat-tailed Grackle; Destruction of our Native Birds (4 pages); Gleanings from Correspondence; Nest in a Horseshoe; 5 short articles. April, '88.
- No. 31.—Oology (Advice to Collectors); Bald Eagle; A Snipe Hunt; Notes taken at Norristown, Pa.; Nidification of *Ictinia mississippiensis*; Among the Warblers; Chestnut-sided Warbler; 6 short articles. May, '88.
- No. 32.—Family *Rallidae* in Michigan (3½ pages); Egg Collecting; Bird Voices; Roadrunner; Notes on the Birds of Beaver, Pa.; 3 short articles. June, '88.
- No. 33.—Loon or Great Northern Diver (2 pages); Eggs of Mississippi Kite; Nesting of Brown Pelican; Breeding Habits of American Flamingo (3 pages); 3 short articles. July, '88.
- Nos. 34-35. Combined number.—Reminiscences of 1886; Trip to Seven Mile Beach; Defense of *Litus*; Field Work in Waukesha Co., Wisconsin; Great Auk; Arkansas Notes; Black Snowbird; Notes for Collectors; Some of our Falconidae; Jim (A Tame Crow); Buffalo International Fair; 8 short articles. Aug., Sep.
- Nos. 36-37. Combined number.—American Osprey; A Day with the Gulls; Florida Notes; A Plea for the English Sparrow; Useful Contrivances; Game Laws; Notes from Lake County, Ohio; South Carolina Notes; A Pleasant Excursion; Sparrows and Cat; Hermit Thrush; Western House Wren; A Few Words to Observers; Flying Squirrels Occupying Birds' Nests; 15 short articles. Oct., Nov.
- No. 38.—Ostrich Farming; An Afternoon's Collecting Trip; California Notes; Notes from St. Lawrence Co., N. Y.; Bird-Arrivals in N. E. Indiana; Bank Swallow; Faunal Changes, —DeKalb Co., Indiana; Audubon Monument; 10 short articles. Dec., '88.
- VOLUME VI.** 20 pages each issue.
- No. 39.—Title pages for binding, with Complete and Exhaustive Index of Volume V.; Breeding Habits of the Bridled Tern; Wood Thrush and Brown Thrasher; From Western North Carolina; Birds of Broome Co., N. Y.; Peculiar Egg of *Corvus frugivorus*; Cuckoos; Notes from Alabama; Carolina Parakeet; 12 short articles. Jan., '89.
- No. 40.—A Red-headed Family (*Picidae*) (6½ pages); Raptories of Michigan; Wild Turkey; Birds of Iowa; The "Critic" Criticised; 8 short articles. Feb., '89.
- No. 41.—Directions for making a Bird or Mammal Skin: The Owl; A Crow Quandary; Birds of Macon County, Ga.; Collecting Experience; Story of a Tame Crow; 6 short articles. March, '89.
- No. 42.—Raptories of Michigan (3 pages); Nesting of the Tufted Tit; Peculiarities in Sets and Eggs of a Few of our Commoner Birds; Difference between White-rumped and Loggerhead Shrikes; Birds of Grafton Co., N. H.; Sample Pages of Davie's New Check-List; 6 short articles. April, '89.
- No. 43.—Avi-Fauna of Orleans County, N. Y. (6½ pages); The Robin; The Crow in the North; Bald Eagle's Nest; Making Bird Skins; 3 short articles. May, '89.
- No. 44.—Birds of Matthews Co., Va.; Changes in the Nesting of Birds; Collecting Tour in Florida; Nesting of Pygmy Owl; Difference between White-rumped and Loggerhead Shrikes; Black-billed Cuckoo in Dakota; Datas; Nest of Marsh Hawk; 4 short articles.
- No. 45.—Michigan Notes (4½ pages); Arkansas Notes; Goldfinch in Confinement; Burrowing Owl; Our Reply; Gleanings from Correspondents; 5 short articles. July, '89.
- No. 46.—Notes from Hillsborough Co., Florida (2 pages); Shore Lark in Canada; Can Quails be Domesticated?; Red-tailed Hawk; Untimely End of a Set of Brown-headed Nuthatch Eggs; Broad-winged Hawk and Black-capped Chickadee; Gleanings from Correspondents; Wilson Ornithological Chapter of the Agassiz Association; 4 short articles. Aug., '89.
- No. 47.—"Old Abe" Jr.; A Day's Collecting Trip; Bell's Vireo; Black Tern; Yellow-rumped Warbler; An Automatic Blower; Flight of Ducks; White-eyed Florida Towhee; Pygmy Owl; Cooper's Hawk; 10 short articles. Sept., '89.
- No. 48.—Winter Birds of Kalamazoo County, Mich. (2½ pages); American Long-eared Owl; Wood Ibis in Illinois; Birds of Bertie Co., N. C.; Collecting in Western Florida; A White Sparrow; Nests and Eggs of North American Birds; Black Tern; 8 short articles.
- No. 49.—Thick-billed Grebe; Birds' Nests; Yellow-billed Cuckoo; Mechanical Egg Drill; Birds Moving their eggs; Cardinal Grosbeak; To Pack Eggs for Transportation; Disposal of Duplicate Specimens; Complete List of the Birds of North America arranged according to the A. O. U. Check-List (6 pages); 5 short articles. Nov., '89.
- No. 50.—Birds of Niagara County, N. Y.: Shore Lark; Incidents in Bird Life; Gleanings from our Correspondence; Marsh Hawk; Yellow-headed Blackbird; Northern Phalarope; 12 short articles. Dec., '89.
- VOLUME VII.**
- No. 51.—Title pages for binding, with Complete and Exhaustive Index of Volume VI.; Notes on Florida Birds (3 pages); Ornithology and Bicycling; Audubon Ornithological Club; Florida Field Notes; Trip to Devil's Glen; Simple Contrivance; Capture of a Trumpeter Swan; 4 short articles. Jan., '90.
- No. 52.—Breeding of the Brown-headed Nut-

bach; Prairie Horned Lark; Collecting Experience; Snowy Owl; Nest of the Texan Bob-white; Unusual Nesting of the Downy Woodpecker; Evening Grosbeak; Blue-Gray Gnatcatcher and Tufted Tit; 6 short articles. Feb.

No. 53.—Summer Residents of Buena Vista County, Iowa; In the Woods of Florida; Birds of Mackinac Island, Mich.; Among the Gulls on Isle Royale; Sandhill Crane; Evening Grosbeak; Ruby-crowned Kinglet; Cactus Wren; Screech Owl in Captivity; Taking Birds' Nests; 11 short articles. March, '90.

No. 54.—Caged Eagles; Evening Grosbeak (2 pages); Solitary Sandpiper; Summer Redbird; Notes from Rochester, Mich.; Family Rallidae in Minnesota; Downy Woodpecker; Hardly Ornithological; 10 short articles. Apr.

No. 55.—Do Birds Mate More than Once?; Habits of the Evening Grosbeak; Pileated Woodpecker in Florida; Bird Protection; Chinese or Mongolian Pheasant in Oregon; Prairie Warbler; Winter Birds in Spring; A Valuable Work; Davie's New Work on Taxidermy; 12 short articles. May, '90.

No. 56.—Nesting habits of the American Oystercatcher; Prairie Horned Lark; Saw-Whet or Acadian Owl; Pine Warbler; Bluebird; Albinos; Pileated Woodpecker in Mahoning County, Ohio; Belligerent Neighbors; Recording the number of Birds Observed. Book Review: Prospectus of the Worcester Natural History Camp (4½ pages); 12 short articles. Je.

No. 57.—American Crossbill; Crested Grebe; Voracious Mountain Trout; Yellow-billed Cuckoo; Long-tailed Chickadee; Rough-winged Swallow; Great Horned Owl; Some Unusual Happenings; Paitas' Cormorant; Eggs of Audubon's Warbler; 12 short articles.

No. 58.—The Caprimulgidae in Arkansas; White-bellied Nuthatch. Strange Co-habitation; Variation in the Eggs of *Habia ludoviciana*; King Rail in Minnesota; 8 short articles. Aug., '90.

No. 59.—The Use of the Camera in the Field; Saw-Whet or Acadian Owl; Nesting of the Black Snowbird; Marsh Hawk; Plum Titmouse; Lost Opportunities; The Magnolia Warbler; Wilson's Plover at Home; 8 short articles. Sept., '90.

No. 60.—The Use of the Camera in the Field. A study of nests (6½ pages, illustrated with 4 photo engravings); The Flathead (Montana) Field; The Owls of San Bernardino Valley; A Collecting Adventure. The Ruby-throated Hummingbird. Ornithologists at Indianapolis; The Burrowing Owl After "Gators' Eggs"; Notes from Northern Minnesota. Oct., '90.

No. 61.—The Ruby-throated Hummingbird (Fairies in a Fairyland) (3½ pages); Notes from Travis Co., Texas; A Week to Mt. Hamilton; Great Horned Owl; Strange Co-habitation; Brewer's Blackbird; Nesting of *Onocrotalus borealis* in Maine; A Letter from Oliver Davis Relating to his New Work on Taxidermy; Notes on *Ardea herodias*; The Prothonotary Warbler; Nesting of the Virginia Rail; The Yellow Rail in Mich.; An Outline of the More Valuable Articles Appearing in the YOUNG OÖLOGIST (3 pages); 7 short articles. Nov., '90.

No. 62.—The Rusty Blackbird; Notes from Ohio; Evening Grosbeak in New Hampshire; The Cala Partridge or Valley Quail; Nothing at All—a Poem; Case for Instruments; Notes from Island Lake, Florida; 3 short articles. Dec., '90.

VOLUME VIII. No. 63 contains 24 pages. No. 64, 32 pages. No. 66-67, 36 pages including cover. The balance, 20 pages, including covers No. 74 also contains an additional 4 page insert.

No. 63.—A Day Among the Fish Hawks; The Marsh Wrens of Hudson Co., N. J.; Now,—The Time to Wage War on the English Sparrow; Nesting of the Downy Woodpecker in Kalamazoo Co., Mich.; American Sparrow Hawk; Anna's Hummingbird; Was it a Cow-Bird's nest? Florida Red-shouldered Hawk; On Owl's Tenacity to Life; Western Horned Owl; Albino Eggs; An Afternoon with the Birds; A "Good Enough" Way to Blow Egg; Meeting of the A. O. U.; Expert Taxidermy; 5 short articles. Jan. '91.

No. 64.—Flycatcher Notes; Collecting in the Marsh; House Finch; The Barred Owl; Yellow-breasted Chat; Anna's Hummingbird; Birds North of Their Usual Range; Egg Collecting—The Two Classes; A Perfect Collecting; Texas Notes; Nesting of *Spinus pinus* in the Northwest. Title pages for binding with complete and exhaustive index for Vol. vii, 4 short articles. Feb. '91.

No. 65.—A New Year's Soliloquy; Water Ouzel; An Ornithological Paradise; "The English Sparrow Must Go"; Fond Mothers; Pusser's Pigeon; The OÖLOGIST; Caracara or Mexican Eagle; The Cooper's Hawk; Some Early Birds of Linn Co., Oregon; Broad-winged Hawk; The Extinction of Our Birds. Mar. '91

No. 66-67.—Combined Number.—A List of the Birds of Elgin Co., Ont.—(6½ pages); Random Notes on the Belted Kingfisher; The English Sparrow; A Few Articles for the Collector; Screech Owl; Western Meadow Lark; Hermit Thrush; *Aves urbis*. A Much Occupied Nest; The Whip-poor-will; Nesting of the Red-tailed Hawk; Cooper's Hawk; The Eagles of North America; Nesting of the Black-capped Chickadee in Kalamazoo Co., Mich.; Nesting of the Purple Finch; The Red-eyed Vireo; Bird Life of an Islet; Migration of the Canada Goose; Association of American Ornithologists; Notes on the Wright's Flycatcher; 3 short articles. Apr. and May '91.

No. 68.—The Hummingbirds of California; Ring Pheasant; The Carolina Wren; American Dipper; A Trip to Pelee Island; Michigan Ornithology; A Duty to Perform; Great Horned Owl; Enemies of Our Feathered Friends; Queer Neighbors; Bird Migration. June '91.

No. 69.—Some Florida Notes; The New Era in Ornithology; The Amusing Antics of a Pair of Brown Thrashers; The Chewink in Orleans County; The Yellow-billed and Black-billed Cuckoos; Changes in Michigan Ornithology; My First Nighthawk's Nest; The Wrens of North Carolina; What causes the Quick Notes of the Whip-poor-will; A Better Report from Texas; Items of Interest from Florida; The American Osprey; Nesting of the Chestnut-backed Chickadee. July '91.

No. 70.—The Story of a Flood; Feeding the Birds in Winter; Nest and Eggs of the Rufous Hummingbird; The Chewink in Broome Co., N. Y.; The Carolina Wren Again; A Trip to Smith's Island; More About the Iowa Eagles; Some Notes on the Breeding of the Carolina Snowbird; Black and White Creepers; Nesting of the Sharp-shinned Hawk; Danger in using Arsenical Soap; Interesting Notes from Oregon; Answers to that Turkey Vulture Query; "Meadow Larks and Turkey Buzzards; Seaside School of Biology, World's Fair Notes. Aug. '91.

No. 71.—The Black and White Creeping Warbler; An Indiana Heronry; The English Sparrow in Bay City, Mich.; Michigan Notes; Gampel's White-crowned Sparrow; A Rare

- bling Mixture from Connecticut; Henslows Sparrow: A Few Notes on Ornithology and Ornithologists; The Ruby-throated Hummingbird; Of Interest to Oologists; How I Found a Killdeer's Nest; Range of the Towhee; Owls as Pets; Michigan Notes; A Rose-breasted Grosbeak Widower; 5 short arts. Sept. '91.
 No. 72.—The Screech Owl; The Divers: In Favor of an Organization; What is the Most Northern Latitude in Which the Chewink Breeds; Notes at Random; Ornithologists Association; Barian's Buzzard and the Red-tail; An April's Outing; Eggs of the Sharpe's Seed-eater; Shall We have a General Association of Scientists; A Trip to Cobb's Island; One of Indiana's New Laws; "Bird Nesting in Northwest Canada." "Fremde Eire im Nest." 5 short articles. Oct. '91.
- No. 73.—The Great Carolina Wren; A Timely Letter; Western Robin; Western New York Naturalists' Association; The Scissor-tailed Flycatcher; California Thrasher; Ornithologist Association; Albino Birds; Chewink or "Chewee"; "Our Birds in Their Haunts"; The Lark Bunting; List of Birds Found Breeding in the Vicinity of Peoria Ills; World's Fair Notes; Relics by the Wagon Load. Nov. '91.
- No. 74.—The Sharp-shinned Hawk; A White Crow; The Pieated Woodpecker; Russet-backed Thrush; How Dr. M. Keeps His Oological Treasures; Thanksgiving Notes from the Far West; The Blue-gray Gnat-catcher in Arkansas; Shall We Organize; Bird Nesting in November; Frauds; A Further Contribution to the Chewink Controversy; One Day's Tramp; The Nest of the Chestnut-sided Warbler; The Gulls; The Carolina Parrot; Bartram's Sandpiper; The Horned Grebe; World's Fair Notes. This number also contains a 4-page inset of Nuttal's Ornithology. Dec. '91.
- VOLUME IX.**
- No. 75—Bird Nesting in North-west Canada; Two Birds of Western Kansas; Ornithologists Association; Western New York Naturalists' Association; The Blue Grosbeak; Maryland Yellow-throat; Chewink; The Bronzed Grackle; Prizes for Best Articles; Are Nesting Cavities Occupied More than Once; Old Recollections; Summer Tanager; "The Way of the Transgressor is Hard"; "Our Birds in Their Haunts." 5 short articles, this No. so contains a plate in two colors of Long Lake and Nests of Canvas-back and Yellow-headed Blackbird. Jan. '92.
- No. 76—Title pages for binding with complete and exhaustive index for Vol. VIII Zootomy—The Domestic Pigeon (Illustrated); Yellow Warbler; Black-throated Bunting; Four Birds of Oregon; My Trays; Pieated Woodpecker; Notes on Albinoes; A Day's Trip for Bald Eagle Nests in Florida; Partridges and Their Relatives; Notes on Some Peculiar Eggs; Collecting on the Farallone Island; Our Winter Visitors; 3 short articles. February '92.
- No. 77—A Pair of Screech Owls at Home (an engraved Frontispiece) Zootomy—The Domestic Pigeon; Incessancy of the Yellow Warbler's Song; Some of Our Thrushes; The Specimens I Didn't Get; Notes from South-western Ohio; A Day with the Ducks; A Trip Through "Wa-ho Hammock;" A True Naturalist; The Crow; Around Omaha; Early Nesting of the Great Horned Owl; A Trait of the Carolina Wren; Visiting a Bald Eagle's Nest in Virginia; The Vireos of Connecticut; The Crossbill in Iowa; Notes from the Virginia Coast; An Hour with the Water Birds; Half-a-dozen short articles, notes, etc. March '92.
- No. 78.—Sharp-shinned Hawk (Half-tone engraving); *Lanius borealis* on Deck; A Vacantation with the Birds; The Ibis of Ledworth Lake; Notes on the Whip-poor-will; The Black Rail in Franklin Co., Kans.; Albino Eggs of the Long-billed Marsh Wren; Notes from Nova Scotia; Scientific Names, Their Use and beauty; Pointers on Making Bird Skins; Collecting on an European Islet; The Great Gray Owl; Collecting and Collectors; A Collecting Trip; Zootomy. The Comes ic Pigeon; Prepare Your Specimens Well; Eleven short articles. April '92.
- No. 79.—Acanthis Linaria; Bird Notes from Oregon; The Woodpeckers; Phainopepla or Black-crested Flycatcher; After Golden Eagles; Among the "Blue-grays"; Treatment of Cases of Ivy Poison; A Trip after Beach Birds; Some of Our Louisiana Birds; A Step in the Right Direction; A Winter Acquaintance; Are Crows Beneficial?; Spring Openers; The Wood Ibis; The Yellow Warbler's Song; Wilson's Snipe; Notes from Southern Wisconsin; Eleven short articles. May '92.
- No. 80.—A Taxidermist's Camp (engraved Frontispiece); The Purple Finch; South Dakota Notes; Some of Our Visitors and Neighbors; The Black Vulture in Orleans Co.; A Day's Collecting in California; The Turkey Vulture; The Purple Finch in Broome Co., N. Y.; Two rare nests; The Chestnut-sided Warbler; Six short articles. June '92.
- No. 81.—A Quawk town; The Hairy Woodpecker; Birds found Breeding in Bertie Co., No. Car.; California Bush-Tit; Nighthawks in Binghamton, N. Y.; *Sitta canadensis* in Montana; A Few Notes on the Red-tailed Hawk; The Hummingbird in So. Car.; Five short articles. July '92.
- No. 82—Collecting on Cobb's Island; Va; The Ashy Petrel (*Oceanodroma homochroa*) on the Farallones; After the Yellow-billed Magpie; An Oological Trip in Central Illinois; Iowa Notes; The Chicadee in Rutland Co., Vt.; The Long-eared Owl; 5 short articles August '92.
- No. 83.—The Breeding Warblers of Western New York; A Tramp Through Wood and Marshes in Eastern Iowa; Acadia Flycatcher; the Prothonotary Warbler; Notes from Bexar Co., Tex; How I Spent Easter Sunday; A California Collecting Ground; Past Reminiscences; Six short articles. Sept. '92.
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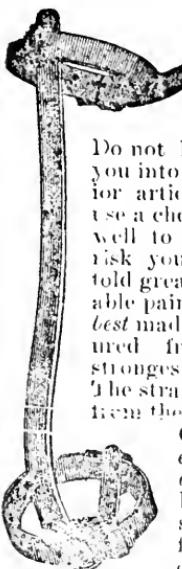
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VOL. X.

ALBION, N. Y., JULY, 1893.

NO. 7

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NO. 7

A Study in Orange and Black.

Thinking that an article on the American Redstart, one of the most noticeable birds in the woods of this region, might interest some of the readers of the OÖLOGIST, I have embodied in this article my experience with, and notes on, this bird since 1889. Most of my observations were made during 1890 and 1892, when they were very abundant here, probably because these seasons, being unusually wet, were characterized by an abundance of small insects, especially flies and mosquitoes upon which this bird seems to live to a large extent.

In 1891 they were very scarce after the migration ceased, (which was late on account of the cold spring) very few of them staying to breed. I think it quite possible that their southern limit may be found to vary in this way, with the seasons.

The first males are usually seen about May 5th and the females follow closely. They will increase to the 15th or 20th when the migrants will move on north. During the spring of '91 they did not come in any numbers until the 15th and nearly all passed on in a few days. During this period of migration the male with his striking colors seems to be everywhere in suitable woods, which are those of a swampy character, composed mostly of deciduous trees. A few will be seen in the more open groves and orchards, and even along the roadsides, in dooryards, etc.

It must not be supposed that the female is there in any fewer numbers, but from her tamer colors and more retiring disposition is not so often seen at this time. Being plainly attired she is much more likely to escape observation than the male, which may be of

some value to her at times, though as we shall see later on, she is just as well calculated to defend herself as her master, if not more so.

I think that the mating season comes very soon after the migrants reach here, probably from May 15th to June 1st. During this period the male is in full song, and the woods of his choice echo and re-echo with the shrill notes of his song delivered in a succession of rather high-pitched and decided notes. His mate also gives utterance to a sweet trill which is difficult to locate if she is far off. Later on the male's song becomes subdued to a finely modulated trill, and the female, except for her shrill warning call to him, is silent.

From June 1st to the 5th the majority of the Redstarts commence building, though one nest found May 29th must have been commenced about the 20th as the eggs were slightly incubated. By the 12th or 14th of June full sets can be found in any suitable wood. The nesting site is generally the upright crotch of some small and not very brushy tree. Young, hard maples ranging in diameter from one inch up to four inches are the favorites. Have also found nests in the following: elms, beeches, soft maples, blue beech shrubs, black ash and basswood.

Although as I have said they generally select the main upright crotch they sometimes build between the trunk and a small limb, and I would mention two exceptional cases as follows:

First. The nest was placed 20 ft from the ground in the top of a 6 in. hard maple which had been broken off and sent out a number of small branches, forming a sort of basin. The nest was securely placed here and was nearly invisible from the ground.

Second. The nest was placed out on

a limb three and one-half feet from the main trunk of a small tree. The limb divided at this point sending up three branches rather vertically. The nest was very firmly wound about all three of these branches, and altogether was a freak for the Redstart.

Many nests that I have seen were situated in very narrow crotches making it necessary to build quite high to get a wide enough spot for the nest, some nests being 5 in. in height and perfectly wedge-shaped in outline. The majority of nests are about 8 feet from the ground, the lowest being 3 ft., the highest 20, (rare).

Many of them are very difficult to reach on account of the slender trees in which they are situated. You cannot climb them and they are often too top-heavy to admit of cutting off, without spilling out the contents. If you try to bend the tree the chances are you will either spill them out or jar them so badly as to crack them. Sometimes you can climb another tree and pull the nest over to you, but this is not always possible. I have taken nests of this bird and also of the Rose-breasted Grosbeak by taking a saw and some one to help me. One of us would hold the tree straight, while the other sawed out pieces of the trunk and lowered it until the nest was within reach. You must be careful however to take a day when there is very little wind or you will get your trouble for your pains, as the eggs (if there are any) will get rolled out.

The nests are composed mostly of the fiber stripped from the milk-weed stalks and various other weeds, lined usually with fine, dried grasses with such exceptions as I shall give below. Have never known them to use any hair in any part of their nest.

In the September number, 1891, of "Collector's Monthly" I saw an article on the nesting of the Red-start, in which the writer mentioned the use of feathers in the nests of the Redstart. I

wrote to the editor that I had never, in a large number of nests examined, found any feathers. Well, experience has materially changed my views on this point. Last summer, 1892, I have found three nests containing feathers as follows: Numbers 1 and 2 were placed in the same woods and but a short distance apart, and, from the close resemblance in the feathers should say they came from the same place. No. 1 was composed almost entirely of feathers, while No. 2 had a few scattered through it. No. 3 was found a week or ten days later in another wood at some distance. A few days before I had found a nest of the Wood Thrush in this wood, and on looking at it the next day found that some owl had captured the old bird from the nest the night before and left the feathers on the ground beneath. The next time I visited this wood I found a nest of the Redstart composed almost entirely of the feathers of this Thrush, at least I think it is safe to presume so, as the nest was but a short distance from the scene of the former catastrophe and the feathers were undoubtedly of this species. So, of course, I am convinced that the Redstart will use feathers when they can be found at hand.

The eggs of this bird will invariably number four if unmolested by the Cowbird. This, however, seldom happens. Most nests containing at least one egg, and many two of the Cowbird, with eggs enough of the Redstart to complete the complement of four. One-nest which I found contained four of the Redstart and two of the Cowbird. The nest was filled to the brim and the bird was incubating them. This is rare however. In many cases the Cowbirds lay their eggs before the Redstarts commence, when she generally leaves her nest and constructs another. I never knew them to cover the Cowbird's egg after the manner of the Yellow Warbler. The eggs vary much,

both in size and color. Two extreme sets are as follows: No. 64 '92 measures .70x.52, .67x.51, .67x.52, .68x.52. The ground color is white. The markings are gathered in a distinct wreath near the larger end and consist of pale lavender shell marks and rather large spots of chestnut. There are also a few fine dots of chestnut scattered over the eggs. This was an unusual set both in color and size being the largest I have a record of.

No. 74, '92, represents the other extreme. It measures 62x.49, .58x.49, .58x.50, .60x.49. The shell marks of lavender are gathered in a wreath about the large end but these are nearly covered by the profuse spots of vineaceous cinnamon, which are distributed thickly over the entire surface in every case. They are very beautiful and represent the smallest and most heavily marked type I have seen. Different sets vary between these extremes.

Unlike the most of the smaller birds, and especially the Yellow Warbler, the Redstart often rears the young Cowbird and its own as well. Their young require a large amount of insect food which keeps the old birds very busy for three or four weeks. The young are all about the color of the adult female, showing very little difference as to sex until the second year. After the young become able to take care of themselves, the whole family enjoy the pleasures of a four weeks' holiday before they start south for the winter. At this time they do not sing much, in fact we hear nothing which could be called a true song until the next spring.

In disposition they are rather inclined to be quarrelsome both males and females, the males, especially during the mating season, are always fighting each other. Their fights take place almost entirely in the air and they make plenty of feathers fly, accompanied by much noise. The females are more fearless than the males during the

breeding season as anyone will notice when they trifle with her home. She will often fly in your face accompanying this with a constant snapping of the beak. I think they sometimes succeed in driving the Cowbirds off if they happen to be at hand when Mrs. Cowbird comes sneaking up; at least they do for a time.

They disappear very silently and we hardly notice they are going before the last one is gone. They are probably as free from natural enemies as any of our birds, and more so than some.

This last season I found a nest on which a female was sitting, and on going to it a few days later I found her dead in a crotch close by with plumage badly ruffled. The nest was not noticeably molested. I do not know how to account for this unless some bird caught her on the nest, and if so why did it leave her without making an attempt to feed upon her? And also, why was the nest unmolested? Wishing success to the OÖLOGIST, I am ornithologically,

ERNEST H. SNORR,
Chili, N. Y.

Birds as Pets

By Macrostoma Megapodus.

Someone wrote on this subject in your journal not long ago, and the article interested me very much. There are many persons interested in collecting, who glory in the name of naturalist, or think that they are entitled to that name, and yet who are mere grabbers of specimens, and who collect because it is the fad of the times. A true lover of birds and their habits is always an observer, and such a one, is far more interesting in conversation than a man or boy who has simply devoted his time and energy, and perhaps money, to the consumable custom of alone gathering specimens.

A person who is devoted to birds for the pure love of watching their interesting habits, is always able to give much agreeable information on the subject, and ten to one, although he may not have a bird's skin or nest of eggs in his possession, he can tell of many peculiarities of bird life unknown to thoughtless collectors. I was once acquainted with an old gentleman who was a great rambler, and a natural-born student of bird life, and yet he never skinned a bird in his life, and took but few eggs, and those under protest for me. Still he knew the varied notes of the birds, and could name the songsters with perfect accuracy from their calls or warblings. He was a great lover of pet birds and I believe if his means would have admitted of it would have had an aviary with all of our songsters in it. It was from him that I first learned to capture and keep wild birds, and this little sketch will give some idea of the successes and failures attending my efforts.

This was many years ago, and at an age when I was like all other boys, inclined to be avaricious. I will never forget the methods I used to employ in collecting. I would start out with gun, insect net, flower press, various boxes filled with cotton for eggs and others for other specimens. On setting out, I much resembled a combination of crazy peddler, Indian medicine man, and wild western cow-boy, with enough of natural, or rather unnatural "boy" in my make up to suggest that I was not as deadly or crazy as I looked. But it was when I returned from these general collecting trips that my appearance created a stir. It is no wonder that the timid little girls used to run into the houses, while the irrepressible small boys would hoot and jeer as I passed. It was enough to secure me a berth in the asylum, or a cell in the lock-up, in any village where I was not known.

Reader, imagine a biped, slim and

loose-jointed, coming down the street, a huge straw hat perched on his head, all covered with blossoms and foliage, and stuck full of dead impaled butterflies and other insects. Ten to one if the hat was lifted, a live snake or two would escape from the crown, where they had been confined. Balanced over his right shoulder is a shot gun, from the muzzle of which dangles a big black snake or blue racer and perhaps a heron or two, while from his left hand swings a string of fish. From the big collecting basket, strapped at the side issue chirps and twitterings which come from a miscellaneous assortment of young birds which are inclined to rebel at the jolting they are receiving from this involuntary ride over a rough road.

Reader, that's me, when I returned from a general collecting trip. On those trips I used to gather most everything, useful and nonsensical, which it was possible to carry, and the amount of litter that I accumulated in the course of a season was something frightful to behold. Anything that excited my curiosity was lugged home, whether animal, vegetable or mineral and it was all the same; and the old skeleton of a horse, a living snapping turtle or a dead skunk received the same attention that was bestowed on the delicate woodland flowers, or the artistic nest of the gnatcatcher.

However, birds was then, and is now my favorite study. During rambles, I found many nests of young birds and these I watched and attempted to get some insight into their food habits. When the birds were old enough to quit the nest, I used to take them home. Sometimes I took but one from a nest, but generally I appropriated the whole brood, excusing myself by saying, that a bird or so might die, it was best to take all of them, so as to make more of raising some of them. Of course this mortality was frightful and it was an unusual day when one of the stall-fed,

or rather spoon-fed young did not die from May fifteenth to July first. One season they about all died, and not content with the test I tried it again the following year. The second year we brought more through because we went in heavier. However, the bird grave yard assumed immense proportions.

My partner in crime was a middle aged man and a manufacturer. He spent about all of his spare moments in feeding the multitudinous young birds, who with scarcely an exception, had insatiable appetites. Bread and milk formed the main reliance, and the amount of dope-mixture which the aggregation of suffering prison-birds would surround was a caution. It kept one boy busy running after fresh bread and milk, and when the weather began to get quite warm, the demands of the young birds and the necessity of keeping the food sweet nearly drove my friend daft. But he stuck to it manfully, and his devotion was only equalled by my heroic efforts to supply new victims.

At last when the second summer waned our stock in trade just equalled its bulk when we began. In other words there was a lone, broken-legged robin left; and this same robin had been the standby of my partner for several years previous to this new deal. Therefore I was 'not in it,' and our partnership busted right then and there, as the trade did not warrant a continuance. He offered me the crippled robin, but I declined with thanks, and have ever since kept out of the ranks of live bird collectors. And now as I look back on that chattering, chirping collection of live birds and think of my partner filling them up all round every thirty minutes, I cannot help but smile out loud. But I also feel sorrowful at the untimely end of those dear little vireos, thrushes, orioles, swallows, tanagers and the cunning flycatchers, chickadees, yellow warblers and redstarts.

Nevertheless, although so unsuccessful with the smaller insect-feeding birds, I had very good luck with many other species at various times.

I once owned an immature Red-tailed Hawk, which I captured after breaking his wing by shooting. It remained healthy and fierce throughout its stay with me, and I never could tame or subdue it in the slightest degree. It fed on meat entirely, and refused all other food, although frequently hard up for nourishment. Its eyes were always wild, and it would strike with beak and talons at everyone. It finally pounced on one of my pet golden Plovers and thrust its cruel claws through the poor creature's body. After this I lost all liking for the moody, ferocious hawk, and I slew him.

Two Barred Owls that I owned at various periods, were quite interesting and lent entertainment to me on rainy days in the city, when I would watch my pets in the barn. This owl, and in fact, all my owls and hawks fed on meat, rats, mice, neighborhood cats, and also frogs and snakes which I would supply. I fed the Barred Owls once a day. On one occasion I was absent a couple of days and when I called on 'snapper' with his meat, he flew at me in his eagerness, and gouged me for my negligence. Ordinarily he was quite harmless, though he made a great bluster, snapping his bill as if very ferocious. A Screech Owl that I owned a short time, escaped from its house, as did also the Barred Owl, but a Screech Owl which a friend of mine owned, became very tame. Once a boy stole it, but it escaped from the boy and flew back to its owner.

I have owned several Great Horned Owls. They make interesting but ugly pets. Taken when old they cannot be tamed. A friend of mine has two, undoubtedly a pair taken when a few weeks old from the nest. They are now three years old or more and very

tame, and he can handle them with impunity. In fact they appreciate attention from him and always welcome him by a glad *scree scree*.

Another friend owned a pet Crow, and this bird had by constant instruction been taught to repeat *jump jim crow*. I must acknowledge, that no one, unless aware of the crow's powers, would understand a word of this poll parrot talk, but I will give Mr. Corvus the credit, by saying that the words were plain enough after we were told what was attempted. This crow would eat most anything from the table.

Blue Jays make lively pets. They are handsome, wicked, vacuous and noisy. They will eat anything and are very tough and easily cared for.

Wild pigeons are easily kept, and I know of their breeding successfully in confinement. An acquaintance kept a few for many years, which he used for stool pigeons during the flight in spring and fall, as he was a netter.* These pigeons used to breed each spring in confinement, rearing one young at a time.

Quail and partridge are easily kept, but it is impossible to rear the young when taken from the motherbird as I have tried to my sorrow.

Hummingbirds cannot be successfully confined, as they wear themselves out trying to escape, dashing themselves against anything in their path. Flycatchers, warblers, swallows, woodpeckers, nighthawks, whip-poor-wills, and in fact all insect-eating birds are impossible to raise from the nest. Nor have I met with any success in keeping the adults in confinement. In direct distinction to this, it is easy to keep all sparrows and other seed-eating birds, and I have proved this with several well-known species. The Indigo bird

thrives in captivity, and I've heard the full, bursting song of the Rose-breasted Grosbeak from a caged bird.

All ducks and geese thrive behind the bars and I know a gentleman down east, who has several species of wild ducks fairly domesticated. Herons and Bitterns will live well in captivity, and it is surprising how easily they will change from a nearly pure fish diet to a table-scrap feed and seem to thrive on it.

Snipes, plovers and sandpipers are readily kept, if one has the time. An interesting pair of pets that I owned were two Golden Plover. They preferred angle worms, of which food they could manage an amazing amount, but could live on beef if it was cut up fine for them. Killdeers can also be kept.

In conclusion, I will say, that the most satisfaction can be derived from seed-eating pets, and I would advise all bird lovers to attempt to keep no other kind of birds, unless it is the droll Blue Jay, tricky Crow or some of the Hawks, Owls, or game birds. On no conditions attempt to raise young birds from the nest, for it is generally a failure. Of the young birds that I have attempted, the common Cedar bird is an easy one to bring up. It can be reared on nothing but cherries of which it will eat vast quantities every hour in the day; but it quickly becomes a nuisance.

A Herony.

On the 15th of May I visited the Herony which I am about to describe. It is twenty miles from New York City, and is situated on Long Island.

The woods were full of Warblers, Robins, Thrushes, Brown Thrashers, Vireos, Black-billed and Yellow-billed Cuckoos, Woodpeckers and Creepers.

As I walked through the woods I heard a sound like the bark of a dog, and stopping to listen I heard another,

*It is owing to the work of these netters, and other despicable game butchers and pot hunters, that we are now suffering from the almost utter extermination of the Passenger Pigeon.

I then knew I was approaching the Heronry. As I drew near the sounds increased and anybody not knowing what they were coming to would have supposed there was a kennel of dogs in the neighborhood, such a sound of barks, yelps, squeals and snarls as arose from the swamp in which the Heronry was located. The swamp was not a very wet one and I was soon standing in the midst of the Colony. On every side as far as the eye could reach were tall white maples in each of which there was from one to five nests of the Black-crowned Night Heron and nearly all of these were being used. I calculated the number of nests to be not less than two-thousand five-hundred and probably more. The Herons made quite a row at first, but soon quieted down.

The first tree I climbed contained four nests, three of which contained four eggs and the fourth one, quite a nice baker's dozen. From my position in this tree I could see about one-hundred nests, all of which contained eggs, and a short distance on my left was a crows nest containing four nearly fully fledged young crows.

The nests varied greatly in size and shape, some being mere platforms of sticks; indeed in some cases the nests were so flat that a heavy wind would have blown the eggs out of the nest. Others however, were considerably hollowed out and of quite large size.

I obtained in the course of the day about one hundred eggs, some of which were fresh but in most cases the incubation was advanced. The trees were not easy to climb being small in diameter but regular sky-scrappers as regards height and when an Oölogist is swinging about at the top of a thin tree, he is perfectly willing to say that Terra Firma suits him better.

The nests averaged forty feet with extremes of twenty and sixty-five.

One nest was not unfrequently placed directly above another with only a few feet of space between them.

While up one tree I dropped an egg and supposing it broken thought nothing more about it, but on returning to the ground I found the egg uninjured buried in the soft mud at the bottom of the tree. It landed directly on its larger end. The eggs varied greatly in size, color and shape. Some were pale blue in color, others a blue green, and still others of a green color. Some were long and rounded evenly at both ends, others were short and pointed, some were quite large, others again quite small, average size 2.10 by 1.45. The average set was four, frequently three, sometimes two, rarely one or five. The sets of one were either caused by the eggs falling from the nest or on account of the heavy rains, cold weather and late spring.

Of several thousands of sets examined during the past few years, by me, there was not one set containing six eggs.

ROBERT C. WOODHOUSE,
New York City.

Notes from Yamhill County, Oregon.

The following notes of 1892 will give eastern and southern collectors an idea of the commonest eggs to be found in this locality.

April 28. Two neighbors and myself took a set of thirteen eggs of the Oregon Ruffed Grouse, (*Bonasa umbellus subini*) commonly called "Pheasant". The nest also contained two eggs of the Mongolian Pheasant.

The nest was a shallow hollow among the leaves under a brush heap, in a patch of vine maple, not very well concealed. The eggs are pure white spotted sparingly with light brown.

May 7. Took a set of four eggs of Oregon Towhee (*Pipilo maculatus oryzivorus*) commonly called Mountain Robin. Incubation advanced. The nest

looked like a Song Sparrow's, being made of round grasses, placed in a bunch of tall grass, well concealed. Eggs similar to eastern Towhees.

June 6. I got a set of six eggs of the Oregon Chickadee (*Parus articapillus occidentalis*) of a neighbor. Incubation begun. The nest was in an oak post, four feet from the ground, at the side of a road and three rods from a house. A splinter had been broken part way down one side of the post, making a hole, the bottom of which was visible from the top. In this hole was the nest made of nothing but hair. Eggs are clear white spotted with brown, most thickly at the large ends.

June 18. Took a set of four eggs of Russet-backed Thrush (*Turdus ustulatus*.) Incubation fresh.

Nest placed fifteen feet high in the crotch of a small dead fir in the woods; made of sticks and moss, lined with leaves. Eggs blue spotted with brown. I have found quite a number of nests of this species, and all but this one have been from three to six feet from the ground, in green bushes generally along the banks of a stream.

July 2. Took a set of six eggs of Arkansas Goldfinch (*Spinus psaltria*) commonly called Wild Canary.

Nest made almost entirely of wool, placed on a horizontal branch of an apple tree, six feet from the ground; measuring as follows: outside diameter 4 in., inside 1.75 in., height 3 in., and depth 1.25 in.

July 12. Took a set of four eggs of the Oregon Junco or Snowbird (*Junco hyemalis oregonus*.) Nest made of grass lined with horse hair, placed on the ground, in a cup shaped hollow even with the surface. The nest was three feet from an often traveled path at the edge of woods.

ARTHUR L. POPE.

The Pintail Duck.

I spent the spring of '93 in the Devils Lake and Turtle Mountain region, North Dakota. There the Pintail is a common summer resident. In early nesting it precedes all other varieties of ducks. They are most generally paired when they arrive from the South and go to housekeeping without delay. Their nest is a hollow spot on the ground lined with grass and down surrounded by "Buck Brush" or wheat stubble, usually near water. Eggs from eight to eleven, more commonly eight. A favorite nesting site is in wheat stubble where many sets of eggs are destroyed each year by fire or the plow. Farmers often put in wheat without plowing only once in three years, hence the drill often drags the eggs out and breaks not a few. But the Pintail does not allow a little thing like that to interfere with incubation, but rolls the eggs back such as are not broken, pulls the nest about her and resumes business at the old stand. I found a nest one day with five eggs in it. Going by there a few days after I was astonished to find the field plowed, but observed two ducks out in the vicinity of the nest. Going out I found they had shoveled the eggs out and were putting a bulwark of stubble about them.

E. S. BRYANT.
Phoenix, N. Y.

Large set of Burrowing Owl.

On April 4th, '91 I found a set of Burrowing Owls eggs, that I think will beat any previous record. The eggs were laid in a squirrel burrow about three feet from the entrance. There were sixteen of them and all were fresh. The set may not have been complete?

I am sure there was only one pair of owls inhabiting the hole as the eggs were all close together and both male and female were in it.

FRED A. SCHNEIDER,
College Park, Cal.

THE OÖLOGIST,

A Monthly Magazine Devoted to

OÖLOGY AND ORNITHIOLOGY.

F. H. LATTIN, & CO., Publishers
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and Items of Interest to the
student of Birds, their Nests and Eggs, solicited
from all.

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* * Articles, Items of Interest and Queries
for publication should be forwarded as early in
the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Rare Nesting.

March 6, 1890 while in the woods
looking for Barred Owls eggs, I had
climbed several trees when on descending
one large Post Oak tree I caught
sight of something in a knot hole in a
tree close by. At first I was at a loss
to know what it was so I started up to
investigate. In ascending I kept a

watch on the hole to make sure the ob-
ject of my search did not get away. On arriving at the hole which was some
twenty feet up the Owl for sure it proved to be slipped back in the main
cavity. As I could not see the bottom I took my hand ax (which I always
carry with me on such occasions) and enlarged the hole so I could insert my
arm when to my surprise I brought forth a little Owl which proved beyond
doubt to be one of the Saw whet or
Acadian Owls. As her hind parts were
unusually plump I thought she would
lay before long, so I brought her home
and placed her in a large cage. I kept
her four days. She would consume five
and six large short tailed meadow mice
in a night, she would not eat in the day
time. The fourth day she laid an egg
and smashed it. I concluded that
would not do so I took her back to the
tree climbed up and put her in the cavity.
I petted her and she appeared to be
very tame. I left but returned every
few days and on the 13th I found she
had laid one egg. She continued until
the 17th when she laid the last egg but
as no one knew of the nest and as it
was in very heavy and seldom traversed
timber I left the set of five eggs until
the 20th of March which date I took a
friend collector along and we both fully
identified her as a Saw-whet Owl.
Nest was in a cavity 20 feet up 10 in. in
diameter 22 inches deep, entrance 3 in.
Leaves and rotten wood was the ma-
terial used. One odd feature in the
eggs is all five are exactly one inch
broad while in length they vary as much
as from 1.16 to 1.20. Size of
bird, length 7.50, Tail .300 Tarsus 1.25,
tarsus 1.75, wing from body 5.75, expanse
of wing 19.00, bill .50, bill black, eyes
yellow or straw, claws blue black. Col-
oration was as given in detail in Cones'
Key to North American Birds. Hope
to hear if others have been taken this
far south 38½ degrees north latitude.

C. BYRON VANDERCOOK,
Ogdin, Ills.

**SCENES FROM THE LIFE OF ALEXANDER
WILSON.**

The Planning of His American Ornithology.

G. VROOMAN SMITH.

IV.

The solitary labor of teaching, at last aroused the restlessness of Wilson's nature and his spirits became much depressed by the monotonous routine of a country school. To him it became a habit of resorting to his flute in leisure moments, and his melancholy and depression was greatly increased by so doing.

The consideration of the life of penury and dependence to which he seemed destined as teacher of a country school, contributed much to increase his mental gloom. Fortunately for science there was living in Philadelphia at this time an engraver, a Mr. Lawson, who was a close friend of Wilson, and who afterwards greatly assisted him in the publication of his great work. It was to this friend that Wilson disclosed the gloomy state of his feelings. Mr. Lawson promptly advised him to renounce his flute and take up drawing as better suited to remedy the melancholy condition of his mind.

The attempt at drawing landscapes and human figures was made, but the results were unpromising and he threw them aside in despair, saying that he was too far along in years, being then about forty, to succeed in the art of delineation. But the time was near at hand when his delineation of nature's forms was to bring forth praise from the greatest artists.

Again his old friend Bartram came to his rescue and advised him to attempt drawing birds, and lent him his own portfolio drawings to copy. The attempt was made and we have only to examine the plates of his great work to see how successful those attempts were.

The key-note of his nature was at last struck. There seemed to be something magical in his new undertaking and his success exceeded that of his wildest expectations.

When Wilson became absorbed and interested in an object nothing could discourage him save that of complete failure. In view of the many disadvantages attending his new pursuit, such as drawing by candle-light and the duties of his school consuming his attention during the hours of day, he never for one moment lost sight of the goal of his ambition; that is of becoming a thorough master of drawing birds. To show how completely he was taken up by his vocation may be seen from a letter written to Mr. Lawson, dated March 12th, 1804. He said that for six days out of the seven he had no more time than just to swallow his meals and return to his *sanctum sanctorum*, as he chose to call his school. For five days of the following week his time was occupied with the same routine of pedagoguing matter; and the remaining two are sacrificed for that itch for drawing, which I caught from honourable self.

For Wilson with his limited store of knowledge on the subject of our native birds, to contemplate giving to the world a complete work on American Ornithology, would seem to us beyond the bounds of reason and the possibility. But it did not appear so to Wilson for in 1804 he was engaged in making a collection and list of American birds preparatory to future publication. Yet this step of Wilson's was not so hasty as it may seem, for he says himself that he long turned it over in his mind before he asked the advice of his friends. After carefully considering the difficulties of the undertaking and of his own ability, he ventured to disclose his intentions to Mr. Bartram, his old friend and adviser. Mr. Bartram at once entered into the project and carefully

weighed the advisability of such an undertaking. He did not question Wilson's ability and acquirements, but he did caution his friend about involving himself in embarrassments which he might never be able to meet. Mr. Bartram referred him to Mr. Lawson, the engraver, from whom he might gain an estimate of the probability of getting the plates made and of the more important thing, the expense. Wilson addressed the following letter to Mr. Lawson:

"I am most earnestly bent on pursuing my plan of making a collection of all the birds in this part of North America. Now I don't want you to throw cold water, as Shakespeare says, on this notion, quixotic as it may appear. I have so long been accustomed to the building of airy castles and brain windmills, that it has become one of my earthly comforts, a sort of rough bone which amuses me when sated with the dull drudgeries of life."

Mr. Lawson fairly stated, in a way far from encouraging, his candid opinion of the seemingly hazardous scheme. Wilson carefully considered the advice of his venerable friend; but his own ardor and inflexible resolution scorned all opposition. Determination conquered and the result was he gave to the world one of the greatest monuments of human industry. A work equally interesting to the scientist and the man of business. Admired by both the writer and the artist as examples of clear expression of thought and accurate delineation of nature's forms.

Intent upon making his great design a success he applied himself indefatigably to the procuring of the necessary drawings and to observation of the feathered songsters. Application to his new employment consumed every leisure moment and he said he was obliged to sacrifice social enjoyments for the purpose of improving in his new vocation.

His own letters written about this

time to his friend Bartram show how rapidly he was progressing in his work and also show how thoroughly he was enamored by his new pursuit. He attempted to draw a few native birds and sent them to Bartram for inspection and correction. Accompanying the drawings was a letter in which he said that they were chiefly colored by candle-light and hence abounded in imperfections. His collection of indigenous birds was now enlarged; and he entertained great hopes of obtaining many new ones in the coming summer. He requested Bartram to write the name of each bird on the back of the drawings, as he knew only three or four of them. To us it would seem presumptuous enough if we were to contemplate writing a treatise on American Ornithology with a knowledge of only three or four species. He said that the face of an Owl and the back of a Lark put him to a nonplus, and he had already spent nearly a week on different ones and afterwards destroyed them both, and got nearly in the slough of despair.

In March of the same year, 1804, he writes to the same individual, that Spring, that lovely season is at hand and the pencil of nature is busily at work with tints and outlines that baffle all description. Soon we may look for feathered strangers, flocking from the south, to fill the woods and fields with their sweet music. Let us look upon those multitude of happy strangers just arriving from the sunny south as so many messengers come to proclaim the power and munificence of the Creator. He admits that he was an ardent admirer of the rural scenes of nature; but since he had attempted to imitate her productions, every bird and flower suggested to him some new idea of beauty. While others were amassing wealth he was bent on gaining a familiarity with the works of nature. While others were immersed in deep schemes of

speculation he was enraptured by the plumage of a Lark or gazing like a despairing lover on the lineaments of an owl. He describes the appearance of his apartments as being crowded with live crows, hawks and owls, opossums, snakes, etc., so that on the whole it has the appearance of Noah's ark; but the patriarch had a wife in one corner and in that particular his ark was deficient. A boy knowing his turn of mind, had brought him a whole basketful of crows. Bullfrogs he expected would constitute his next load if he did not issue orders to the contrary.

In conclusion I cannot refrain from quoting Wilson's own words when he describes in such touching language the actions of a mouse that he was attempting to draw. In these few lines is to be found much of Wilson's nature viz : his noble human nature and kindness to dumb animals; and how clearly it is shown I leave it to the reader to judge.

"One of my boys caught a mouse in school a few days ago, and directly marched up to me with his prisoner. I set about drawing it that same evening and all the while the pantings of its little heart showed it to be in most intense agonies of fear. I had intended to kill it, in order to fix it in the claws of a stuffed owl, but happening to spill a few drops of water near where it was tied, it lapped it up with such eagerness, and looked in my face with such an eye of supplicating terror, as perfectly overcame me. I immediately untied it, and returned it to life and liberty. The agonies of a prisoner at the stake, while the fire and instruments of torment are preparing, could not be more severe than the sufferings of that poor mouse; and insignificant as the object was, I felt at that moment the sweet sensations that mercy leaves on the mind when she triumphs over cruelty."

The Chimney Swift.

From pre-historic times to the present those things which have in any way mystified man, have been accounted for by some superstitious fancy. The ancients had exceedingly fertile imaginations, and if they were unable to account for a strange event scientifically, mythical superstition would come to the rescue. The steady advance of science, however, has undermined and exploded the majority of these purile fancies. But a few still remain with us and I have no doubt, some will remain for our scientific posterity to dispose of.

I do not know when or by whom the idea that certain birds hibernate in muddy tracts, was originated, but the nineteenth century was considerably advanced before certain people were made to understand, that instead of burrowing in mud or in other places equally absurd, the birds in question, were enjoying the balmy air and gentle breezes of the sub-tropics. It is said that considerable testimony is on record where witnesses of good repute, have come forward and stated that they had seen birds in the act of plunging into their murky winter quarters. The majority of this evidence is quite ancient, but as late as 1877, the Duke of Argyle, in *Nature*, quoted Sir John McNeil, who said; "I have stated, and I now repeat, that I have seen swallows in large numbers hibernating." I remember of seeing a clipping, from an old paper, in the *Young Oologist*, which gravely spoke of the "submersion of swallows."

Perhaps the Chimney Swift was one of the last birds to become emancipated from this ancient fallacy, and to have its true habits revealed by the dawn of modern enlightenment. Its peculiar custom of living in eaves, hollow trees and later in chimneys, and its seminocturnal habits, no doubt, retarded some-

what, its true history from becoming known to ornithologists. Its sooty color was triumphantly alluded to by people of small mental capacity, as substantiating their theory of mud hibernation.

Fortunately these ancient ideas have now been disproved, and we can study the peculiarities of the Chimney Swift, unhampered by them. The bird under consideration arrives in this state about May 1st to 15th. It winters in the West Indies, Mexico, Central and South America. On its arrival here it is first noticed rapidly dashing through the air, in large circles, and occasionally making eccentric deviations after minute insects, which it devours in large quantities. As an insect destroyer this bird is a great benefit to a community, and yet the farmer will pull down the old fire-board, detach their nests from the flues with a pole or hoe, and destroy their eggs or young. This is done because during the hours of night, the Swifts create too much noise, and seriously disturb the farmer's sleep. The sound produced by them beating their wings against the enclosed air, and the inner surface of the chimney, sounds like distant thunder, and it is truly annoying.

It is said, that these birds never alight out side of the places in which they stay at night, and I have watched them much, and have never seen them do so. Even the short dead twigs of which their nest is composed, are snipped from trees during the bird's flight. A sort of a bracket-like nest is constructed of these twigs, which are strongly and artistically agglutinated together by the bird's saliva, and it is gummed to the interior of the flue, or where ever it may be built, by the same substance. Within the slight concavity of the nest three or four elongated white eggs are laid. If the rain happens to trickle down the flue, the saliva is liable to become loosened, when nest and con-

tents are precipitated to the bed of soot in the bottom of the chimney. I once had a nest that was built on an incline, so that the eggs would roll out of it as fast as they were laid. For all of the difficulties these birds have to overcome, they usually rear one brood of young in a season, and occasionally two.

When the Chimney Swift is at rest, it clings to the side of the flue, like a woodpecker on a tree butt, and the peculiar spine-like termination of its tail feathers greatly facilitates this manner of resting.

In this city there are some tall mill chimneys which are out of use, and these birds, at times, may be seen around them in clouds. One evening just after sunset, several years ago I witnessed a remarkable congregation of Swifts around these chimneys. It was just as they were flocking, preparatory to their departure for the south, and at the time I estimated that there were ten thousand birds flying in extended circles around the chimneys. At first they could be seen off in the distance as far as the eye could reach, but as darkness encroached, their circle of flight was contracted, until they were hovering over the chimneys in a huge whirling mass. For some time scattering ones had been settling into the flues, but at this time there was a steady stream of birds pouring in, and when darkness spread its cimmerian mantle over the scene the ingress of the Swifts had not ceased.

Audubon visited a great hollow tree in Kentucky, where these birds were wont to enter at night, and he entered the tree with a lantern one evening, through an opening he had cut at the base. He computed the area of the interior surface of this tree, and the number of birds occupying a square foot, thereby estimating that at least nine thousand birds were clinging to the perpendicular interior of the tree.

About September 1st the Chimney Swift departs on the southern migration, which in my mind is much more preferable than hibernating with the eels.

CHARLES L. PHILLIPS,
Taunton, Mass.

Among the Least Bitterns.

BY C. S. BRIMLEY, RALEIGH, N. C.

Not far from Raleigh, by the side of a small creek, there is a good sized marsh filled with a dense growth of cat-tails, and bulrushes, with scattering patches of swamp rose in the water, and willows, alders and other bushes around the edge and in some of the drier portions of the swamp.

The bulrushes do not grow in company with the cat-tails (*Lypha latifolia*) as a rule but occupy large portions of the swamp by themselves growing in tussocks separated by one to three feet of space from each other, the water in this portion of the swamp being about two feet deep.

On May 23, 1893, accompanied by my dogs Torp and Blazes, I started out to get what I could from the swamp; the first part I tried furnished nothing but several Redwinged Blackbirds nests with three or four eggs in each which I did not take, so I went around to a large tract of bulrushes on the north side of the marsh; before I had gone many yards into the swamp a Least Bittern rose and was beautifully missed; he however settled in a willow on the edge of the marsh and was promptly bagged at the next shot, proving to be a nice male.

On re-entering the swamp and proceeding through the bulrushes towards a patch of swamp rose, another Least Bittern arose out of them and went off in safety; as this one looked like a female, I searched among the rose patch and soon found her nest containing five young, one being a runt, their backs and

wings covered with yellow down and a lengthened crest of down on the head, funny looking little creatures. The nest was a saucer shaped platform of bulrushes, built partly on rushes and partly on the rose bushes about eighteen inches above the water.

The young were promptly bagged and I soon flushed another Bittern, which I shot at as she was flying over a dense bunch of cattails and on searching among them my dogs finally found her, and my second bird, this time a female was bagged.

On going round the swamp I flushed a third and finally got a shot at him but could not see the result; Blazes however found him, and my third Least Bittern, a male this time was bagged. Near where I shot him down I found what I thought was another nest just started. A week later, on May 30, I again tried the swamp; almost as soon as I entered it, another Least Bittern was flushed and bagged, a female; after this I went to look up my supposed nest and flushed the female off it. I could not get a shot but secured three fresh eggs from her nest which was a saucer shaped platform of bulrushes built in the top of a bulrush tussock two feet above the water, and partly supported by the rose bushes.

I flushed several more Least Bitterns, but could not get another shot. Later on however I flushed a large bird which I shot down as he rose with the thought "Great Blue Heron in dull plumage, don't want him, but looks too tempting not to shoot at." On reaching the place where he fell, it proved to be an American Bittern with one leg and one wing broken, but able to strike savagely at the dogs, both of which received several sharp blows on the nose and cheeks before I secured him. The Bittern was a female with enlarged oviduct and small ovaries, and the breast considerably bare. I judged, she was a sitting bird, thus adding another

species to those that breed at Raleigh. A few minutes later I found a third Least Bitterns nest just finished, similar in construction and situation to the other two. Next day May 31, I killed two more Least Bittern, both males and found a fourth nest, containing five hard sat eggs. This nest was built of dead cat-tail leaves and was placed two and a half feet above the water, in a tall bunch of live cattails, and was saucer-shaped like the others. On visiting the nest I found the previous day, I approached to within three feet of it before noticing that the old bird was on the nest and she did look funny; she was standing or sitting on the nest, I could not well see which, her body and neck perfectly upright and her bill pointing straight upwards also.

Her body and neck were flattened as much as possible and her light yellow eyes stuck out on each side of her head, as she stood facing me as motionless as a statue, looking so long and thin. I almost laughed as I looked at her; on making a slight movement she flew off and I let her go unharmed; however, I did not get a set from the nest as a very heavy rain the next day beat the nest all out of shape and when I went a week later to take the nest it had been deserted. And with I this will close what was to me an interesting chapter in the study of our marsh birds.

The American Magpie.
Pica pica hudsonica

I propose to the friends of the "OÖLOGIST" the intelligence of the "American Magpie."

These lines will be fully appreciated by those who have lived among the western snow capped mountains, the abode of this envious bird, and have witnessed the grand and wild scenery which makes one feel inspired with nobler and grander thoughts; and "look

through Nature to "Nature's God," even through the cunning and rogueish tricks of the Magpie.

This bird may be found within the range of the Rocky Mountains, but not as far west as California. It will be seen more abundantly in Colorado, Montana and the neighboring states.

Their nests are very conspicuous and large being made of small dry sticks strongly placed in the top of a bunch of willows by the side of a creek, or in some large pine tree on the mountain side. The size of their nest varies from ten to eighteen inches in width and from fifteen to forty inches in height with an arched roof and a hole in the side near the top for the entrance of the bird.

The Magpie commences to lay in April but May is the month in which most of the eggs are deposited. Last spring I took a clutch of seven from a nest the first of April. The number of eggs varies from five to nine commonly seven to eight, and are of a greyish white with a yellowish or greenish tinge, variously mottled with purplish or violet brown.

The American Magpie is well known among the earlier travelers and settlers as may be seen by reading and hearing the various stories related about the cunning and thieving habits of this bird. They have been known to fly in the house at dinner hour and seize a piece of meat from the plate even when the occupants were seated around the table. They will steal anything they can get hold of and if they are a pet bird as was the case quite often among the early settlers to have tame Magpies they generally made it a point to get hold of a great deal more than desired by the unfortunate ones who had to go without something for their dinner.

There is one curious trait about this bird that is quite interesting. It will alight upon the cattle and horses while out on the ranges in the winter months and pick the grubs from their backs,

and if the weather is cold and the snow deep so as to render it hard for them to get food they will pick large holes in the backs of the more feeble cattle, and as the sore becomes numb from cold they continue their destructive work till the critter becomes too weak to resist the battle and give themselves up to the mercies of this terrible pest.

Except in the breeding season this bird is one of the hardest of the feathered family to hunt. If you do not want to shoot them they are tame, but as soon as a gun arrives on the scene the Magpie is sitting in a distant tree beyond the reach of any marksman. And if you do get a fair shot at one by some keen stratagem of yours, the many noises that hundreds were making before the report of the gun are all quiet now except the rustling of wings in the underbrush. And in a minute or so they may be seen rising from all parts of the low brushy creek bottom and gathering in flocks they wing their way far from the place where you are standing in hopeless meditation. You might as well turn homeward now as one shot on a mountain stream will drive every bird far up the creek and keep them on close lookout for several days.

However in the breeding season they can be shot easily, as they try to protect their eggs from plunder.

What can be more delightful than to start out on a collecting trip early in the morning with a basket and after roaming over the rugged mountain side up one gorge and down another breathing the pure and bracing air of the western highlands. To return home and find that you have taken ten or fifteen clutches of beautiful fresh eggs.

I would like to tell you more about the habits and tricks of this interesting bird as seen in the clear sunlight winging its way from tree to tree; and as a mounted specimen it is a grand work of art to study the different expressions and casts of mind that can be brought

out by the different positions the taxidermists may place him.

All I can say to the readers of this and to the lovers of science is that the study of Ornithology and Oölogy, is a grand and elevating science. It is one in which a true searcher after truth may see the height and breadth that the human mind is able to expand to.

Then let us all, through the elevating and ennobling study of this science mould our life after the pattern for which we were created, and placed in this great cycle of life and decay.

W. T. SHAW,
Bozeman, Mont.

MAY CONTEST.

Sixty Judges.

Prize winners and credits received by each were as follows:

1. Among the Snake Birds. 219.
2. Raptore of Omaha. 140.
3. California Quail in New Zealand. 139.
4. Short-billed Marsh Wren. 103.
5. / Plumage. 82
5. / Courtesy and Business in Exchanging. 82.

The following were awarded one year's subscription to the OÖLOGIST:

Life of Alexander Wilson. 58.

Prairie Horned Lark. 52.

Below we name the winners of the Judges' prizes and the order in which they named the winning articles in their decisions.

1. No. 11—A. R. Hutchinson, Gaines, N. Y. 1, 2, 3, 5, 4.
2. 1—W. H. Myles, Hamilton, Ont. 1, 5, 3, 2, 4.
3. 3—Ed. Doolittle, Painesville, O. 1, 3, 4, 5, 2.
4. 28—Jno. S. Fiddes, Jackson, Minn. 4, 1, 5, 2, 3.
5. 56—B. C. Rhodes, Toulon, Ills. 2, 4, 3, 5, 1.

A World's Fair Almanac was awarded to S. H. Robbe, Belleville, Mich.

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Assisted by Capt. Chas. E. Bendire, J. Parker Norris, Esq., and
Capt. B. F. Goss.

It gives the Common and Scientific name of every North American Bird according to the A. O. U. Nomenclature. It also gives the A. O. U. Numbers as well as those of both Cones' and Ridgeway, and last but not least it gives the value of eggs of *nearly every* species, over one hundred of which never appeared on any printed list before.

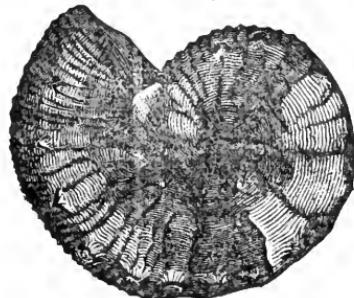
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Hundreds of the Readers of the Oologist will visit them during the World's Fair year and they should make it a point to visit

TUGBY'S NEW MUSEUM.

This new museum is located on Falls street, only a few steps from R.R. Depots—Electric car line passes by its entrance—and occupies a new three story building, which cost thousands of dollars to build and fill—Among the hundreds of attractions within will be found a large and magnificent collection of Birds and the LARGEST COLLECTION OF BIRDS EGGS in a Public Museum in the State.

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BRUNN Nails up signs, distributes circulars, papers, samples, etc., throughout Blackhawk and surrounding counties only \$3.00 per 1000. Address W.H.BRUNN, Waterloo, Ia.

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400 VARIETIES OF STAMPS \$1.00

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W. F. GREANY,

827 BRANNAN St. SAN FRANCISCO, CAL.
Catalogue for stamp.



ONLY DIRECTORY on Earth Guaranteeing 50,000. For only 10 cents (regular price 25 cents,) your name, if received within next 30 days, will be boldly printed on gummed paper, and from Publishers, Manufacturers and others, you will receive hundreds probably thousands of valuable Books, Samples, Papers, Magazines, etc. **All free** and each parcel with one of your boldly printed addresses pasted thereon. **EXTRA:** We will also print and prepay postage on 500 of your gummed addresses to you, for your personal use; which are valuable to stick on your envelopes, books, etc., to prevent their being lost. REEDSVILLE, N.C., Dec. 6, 1891. DEAR SIRS: My 500 addresses received. From my 25 cent address in your Lightning Directory I have received over 2,000 parcels of mail. My Addresses you scattered among publishers, manufacturers, etc., are arriving daily, on valuable parcels of mail, from all parts of the World. J.A. WARE.

THE LIGHTNING DIRECTORY CO.

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H. H. & C. S. BRIMLEY,
RALEIGH, N.C.
COLLECTORS.

First-class Bird and Mammal Skins and Eggs. Also Reptiles, Batrachians, Embryos, etc., in alcohol. Full data in all cases. Write for price-list.

\$300.00 WORTH OF PRIZES

Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
THE OÖLOGIST.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7 50
Ridgway's "Manual of North American Birds".....	7 50
Chamberlain's "Nuttal's Ornithology" (2 vols.).....	8 00
Goss's "Birds of Kansas".....	7 50
Wilson's (and Bonaparte's) "American Ornithology".....	7 50
Maynard's "Birds of Eastern North America" (text complete). .	15 00
Washington Irving's Works, 10 vols.....	7 50
Wm. M. Thackeray's Works, 10 vols.....	10 00
Chas. Dickens' Works, 15 vols... .	11 25
Jenk's "Comprehensive Commentary of the Holy Bible." 5 large 900 paged Volumes..	25 00
Sir Walter Scott's Works, 12 vols	12 00
\$10 worth of Phonographic Books and Publications.....	10 00
An 8-qt. Jack Frost Ice Cream Freezer	6 50
A Due-Bill good for \$31.50 towards a new \$46.50 Marlin Repeating Rifle.....	31 50
A Due-Bill good for \$33.00 towards a new \$45.00 American Union (same as New Home) Sewing Machine.....	33 00
A Due-Bill good for \$12.00 towards a new \$20 double case Odell Type writer.....	12 00
2nd Prize each month will be a part of "Maynard's Birds of Eastern North America," each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50.	
3d Prize—Langille's "Our Birds in Their Haunts", \$3.00	
4th Prize—Brewer's "North American Oölogy" unbound, no plates, original price about \$3.00.	
5th Prize—Baird's Review of American Birds" originally sold at \$2.00.	

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded the OÖLOGIST for 1893 bound in cloth and gilt.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the OÖLOGIST.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than the *first* of *next* month. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talk about Business."

3d A Combination Microscope.

4th An Agate Watch Charm.

5th A Pocket Knife.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 cts.).

All Judges' prizes are sent by mail prepaid.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.

THE OÖLOGIST.

Monthly. 50c. per Year.

VOL. X.

ALBION, N. Y., AUG., 1893.

NO. 8

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

W. WRIGHT, Fullerton Ave., Montclair, N. J. has a genuine first-class birch bark canoe. Will sell or exchange for detective camera. Send for description.

FINE SETS of Eggs and Skins given in exchange for Star tobacco tin tags. HENRY DAVIS, North Granville, N. Y.

WILL accept as many Star tobacco tin tags between now and Sept. 15th as you can send me giving you in exchange some rare bargains in eggs in sets with full data for same. HENRY DAVIS, North Granville, N. Y.

STAMPS WANTED.—Will give fossils, minerals, shells, eggs or scientific books for all kinds of stamps in any quantity. Good exchange given for Columbian and all kinds of U. S. stamps. Collections wanted. E. S. PARK, 1125 Pleasant St., Des Moines, Ia.

TO EXCHANGE.—Sets with data of Hummingbirds with nest with branch attached. Raptures and other desirable sets and singles also, new \$10.50 Smith & Wesson revolver, 32 calibre, double action for a good camera, rifle or telescope. EDMUND HELLER, 195 Rubidoux Ave., Riverside, Calif.

WANTED.—Star tobacco tin tags in lots of 10, 20, 30, 40, or 50. Will give in exchange eggs in sets taking tags at 3c. each. HENRY DAVIS, North Granville, N. Y.

WANTED.—Volumes of "The Auk" will give eggs and climbers for them. To exchange sets and singles for sets. Western and southern correspondents wanted. JOHN C. BROWN, Carthage, Mo.

TO EXCHANGE.—A fine collecting gem, also very choice lot of minerals for a first-class kodak, detective or tourists camera. PHILIP W. SMITH, JR., Mona House, St. Louis, Mo.

TO EXCHANGE.—Sets with data. Herons, Hawks, Ducks, Grebes, Sandpiper, Bittern. Wanted, sets Murres, Cal. Murres "Brummei's" Murres, Pallas' Murres, Razor-billed Auk, and many others. J. BELLEFIELD BLAN, N. York, N. Y.

NOTICE.—I have a fine list of first-class sets and singles to exchange for sets with data. Also Egg tools and data given in exchange for eggs. ISADOR S. TROSTLER, 4216 Farnam St., Omaha, Neb.

FOR EXCHANGE.—Skins of Ivory-billed Woodpecker for Eggs in sets or cash. HENRY DAVIS, North Granville, N. Y.

I WOULD like to exchange mounted birds for same, also to correspond with Taxidermists, also eggs wanted. A. S. BROWER, Box 150 Ballston Spa, N. Y.

WANTED.—Especially large fine sets. Bald Eagles, Pigeon Guillemot, Royal Tern, Yellow-nosed Albatross, Northern Eider, White and Scarlet Ibis, Canada Grouse, Sharp-shinned Hawk, Prairie Falcon, Chuck-will's-widow, Parianus and Long-billed Curlew. None but the finest desired. Will exchange or pay cash. CHARLES M. ELDREDGE, 311 Chamber of Commerce, Chicago.

FOR EXCHANGE.—Eggs in sets with full data for Star tobacco tin tags. Want 2000 or 3000. HENRY DAVIS, North Granville, N. Y.

WANTED.—Everybody interested in birds to send for my new price list, also want anybody having skins for sale to send me their list. I especially desire skins of Wild Turkey, Carolina Paroquet, Gulls, Terns and Sea Birds, Willow Ptarmigan, Canada Grouse, Eagles, Vultures, Geese, Fiders etc. Also want a good collector to collect Ducks, Geese etc. for me this fall and winter. EDGAR A. FERO, 116 Ontario St., Cohoes, N. Y.

PERHAPS this will interest you. A fine set of 2 Great Black-back Gulls for \$53 or a set of 3 for \$80. Gray-crowned Lemostethus, Rusty Black bird and Fleck-throated Green Warbler nicely stuffed for \$1.00 or \$1.50 each, postpaid. JAMES P. BABBITT, Taunton, Mass.

MANY varieties of stamps and single eggs to exchange for sets with data. Send list of sets soon as I receive it about 2000 varieties of stamps. W. H. SENTON, 216 North Main Street, Baltimore, Md.

WANTED.—Double barrelled shotgun. For trade, Small Printing press, full printer's case of type, .22 cal. pocket rifle, .38 cal revolver and 6 keyed piccolo. C. W. WELLS, Atlanta, Ill.

TO EXCHANGE.—\$100 worth of stuffed birds and mammals, eggs, stamps and rifle for watch and bicycle. FRED S. HAGGART, Chagrin Falls, Ohio.

FOR SALE.—First-class sets or singles of American Bittern at 30¢ per egg and other eggs in proportion. Will exchange eggs for good .32 cal. revolver or violin. DANA C. GILLETT, Barre Center, N. Y.

FOR SALE.—A \$45 safety, 26 in. solid tire in good order \$20. Mounted Horned Owl, extra fine \$5.00. Mounted Red-tailed Hawk, wings spread, \$3. C. E. PLEAS, Dunreith, Ind.

WANTED.—Skins, eggs. Have skins, Cabinets, cases, etc., made to order, 9 years experience. Send lists. A. W. HANAFORD, 21 Olive St., Grand Rapids, Mich.

SETS for sets. Yellow Warbler double and single nests. Purple Grackle, Catbird, Song Sparrow, Blackbird, Phoebe, Bluebird, Robin and turtle eggs. J. H. CLARK, Paterson, N. J.

5000 duplicate specimens of Insects in all orders, mostly named, to exchange for others or eggs. Would like Hercules or Goliath Beetles. E. D. BALL, Ia. Ag. College, Ames, Ia.

TO EXCHANGE. My entire collection of 800 birds eggs in large or small lots for minerals or Indian relics. C. G. SARGEANT, Winnebago City, Minnesota.

FOR SALE.—Hummer's eggs, Costa's n-2 \$1, Calliope n-2 \$1.25, Extra nests 25¢. Many other California Birds Eggs for sale or exchange. Send for list. DAY & GARNIER, Deluz, San Diego Co., Calif.

NEW MEXICAN mounted birds and five pairs of Great Horned Owl's eyes to exchange for eggs, skins, Davie's Eggs, cloth bound, latest edition, and taxidermist's instruments. EMERSON ATKINS, East Las Vegas, New Mexico.

EXCHANGE NOTICE.—Rare sets to exchange A. O. U. No's 10, 18, 31a, 72, 84, 137, 250, 334, 417, 579, 615, 667, 707a, 728 and many others. CHARLES E. DOE, 61 Comstock Ave., Providence, R. I.

WANTED.—Star tobacco tin tags in lots of from 100 to 500. For every 100 Star tags sent me between now and Sept. 15th I will give any one of the following sets with full dat.: Anna's Hummer n-2, Costa's Hummer n-2, Black-chinned Hummer n-2 or will accept tags allowing you 3c. each in exchange for eggs. For 1000 Tags a fine skin of Ivory-billed Woodpecker put up in first-class condition. For 2000 tags one fine gold filled watch case guaranteed to wear 15 years with Am. Waltham or Elgin movements, value \$25. For 3000 your own selection of sets to the amount of \$3.00 from a large list of rare eggs. For 5000 any of the following: one gold watch case, cash value \$50, One Remington double barrel breech loading shot gun with full set of reloading tools and 200 loaded shells, cash value \$50. Sets, your own selection, from such sets as Hawks, Owls, Gulls, Ducks, etc., etc., or accepting tags at rate as stated before. You can forward me tags in small or large lots. Match box is a good thing to send them in. Any other information cheerfully furnished. HENRY DAVIS, North Granville, N. Y.

SEND me a trial order for Job Printing. Anything in the line of Letter heads, Envelopes, Datas, Labels, etc. May exchange some for eggs. W. W. LOOMIS, Clermont, Iowa.

FOR EXCHANGE.—First-class Bird Skins and a few sets, for first-class skins. Send list and receive mine. WILL DE LA BARRE, 1301 7th St. So. Minneapolis, Minn.

NOTICE.—I will exchange Maynard's Butterflies of New England for best offer of eggs in sets with data. Address THOS. A. SMITH-WICK, Walkerville, N. C.

I WANT Medical Text Books, Charts, Manuscripts and Anatomical preparations, can give skins, mounted specimens, Natural History. Manuals and other books, eggs, set mechanical telephones, fluting machine, fine laundry irons, everything new. If nothing in the anatomical line, what have you to offer. J. J. WIRZ, Rutherfordton, N. C.

SPECIAL NOTICE.—To exchange, Egyptian Vulture 1-2 (*Nephron percnopterus*) and Emu 1-5 (*Dromaius novaehollandiae*) for best offer in first-class sets or such works as Nuttal's Ornithology, Hornaday's Taxidermy, Goss' Birds of Kansas, or Bird Nesting in North-west Canada. No postals answered. DR. MARTIN, Wellington, Kansas.

TO EXCHANGE.—I will exchange first-class singles for sets with data. Send list and receive mine. R. H. OLNEY, Marathon, Iowa.

I HAVE 160 kinds of Foreign and native woods will exchange for woods not in my collection. 72 of them are from British Syania, S. A. Address LOUIS W. HAHN, Box 360, Silver Creek, Chautauqua Co., N. Y.

TO EXCHANGE.—A fine collection of 70 varieties 1st class singles, Cata. value \$10, for camera, printing press, rifle, sets, etc., or for cash at $\frac{1}{2}$ price. Make offers. I. H. STRATTON, Toulon, Ills.

WANTED.—Strictly first-class sets of Meadow Lark, Horned Lark, Osprey, Red-tailed and Red-shouldered Hawks, Screech Owl, Red-eyed Vireo, Cedar Bird, Hairy and Downy Woodpeckers, Yellow and Black-billed Cuckoos, Belted Kingfisher, Purple Martin, Passenger Pigeon, Killdeer, Bartram's and Spotted Sandpiper, Laughing Gull, Skimmer, Caspian and Roseate Terns, Leaches' Petrel, American Bittern, Blue-Terns, Black Tern, Warblers, etc., many others. Can offer in exchange some rare sets which I collected this spring in Northwest Canada and the Rockies and also fine sets of Sea birds, Plovers, Hawks and Owls from Iceland and Lapland, send for my list of duplicates. W. RAINES, Bleeker St., Toronto, Can.

FOR EXCHANGE.—Western Gull 1-2, Laughing Gull 1-3, Sooty Tern 1-1, Bridled Tern 1-1, Black Tern 1-3, Noddy Tern 1-1, Farrallon Cormorant 1-4, Least Bittern 1-5 1-6, Virginia Rail 1-8 1-10, Sora Rail 1-8 1-9 1-10, Fla. Gallinule 1-6 1-9 1-10, Bart. Sandpiper 1-4, Bobwhite 1-10, Red-tailed Hawk 1-2 1-3, Red-shouldered Hawk 1-2 1-4, Screech Owl 1-4, Black Phoebe 1-4, Bobolink 1-1, Yellow-headed Blackbird 1-5 1-6, Long-billed Marsh Wren 1-5 1-6, Meadow Lark 1-4 1-5, Yellow-billed Magpie 1-5, Bank Swallow 1-5, Tree Swallow 1-5, Cliff Swallow 1-5 1-6, Yellow-billed Cuckoo 1-1, Black-billed Cuckoo 1-3 1-4, Chachalaca 1-2, Caracara 1-2, Belted Kingfisher 1-6, Orchard Oriole 1-4 1-5, Scissor-tailed Flycatcher 1-1 1-5, Limpkin 1-6, Sooty Grouse 1-5, Cardinal 1-1, CHARLES M. ELDREDGE, 314 Chamber Commerce, Chicago.

EXCHANGE NOTICE—My collection and duplicates of stamps, postal cards, Mexican envelopes for eggs or skins. J. K. STRICKER, Jr., care of J. W. Gooch, Waco, Tex.

SETS of White-faced Glossy Ibis, Avocet, Black Stilt, Least Vireo and others to exchange for desirable first-class sets. Send list. A. M. SHIELDS, Los Angeles, Cal.

WANTED.—Live squirrels, coons, foxes, etc. Will give eggs, stamps and cash. Write stating what you have and price wanted. W. A. JOHN-SON, 123 W. Brooks St., Galesburgh, Ill.

EXCHANGE.—A. O. U. Nos. 152 1-11, 375 1-2 1, 368 1-2, 337 2-2 1-1, 325 3-2, 373 1-3, 417 2-2, 333 2-4 408 2-3, 618 3-3 1-4. Specially desire sets with unquestionable data of 305, 310, 314, 362, 349, 352, 182. Also have cheap sets for same. WILFRED LAMSON & CHADWICK, Loring, Kas.

FOR EXCHANGE.—A few choice sets. 141 1-10, 335 1-2, 337b 1-2, 360 1-5, 362 1-2, 373c 1-2, 378 1-7, 431 n-1 n-2, 476 1-6 1-7, 742 n-4 and many others. WILFRED H. OSCOOD, San Jose, Cal.

WANTED.—Shot gun except single muzzle loader, Rifle breech loader except cheap grade florets. Revolver best grades. Safety Bicycle, Field Glass, Carpenter tools. Will give extra good exchange in Eggs, Watches, Books, Papers, V nickels. C. BYRON VANDERCOOK, Odina, Ills.

EXCHANGE.—Great Events of the Greatest Century (\$8.50) and Rand, McNally & Co's Atlas (\$1.50), both new; for Coues' Key in good condition. A. S. PEARSE, Beatrice, Neb.

WANTED.—A Remington Cane Gun, 22 cal. Also Cassins' "Birds of California" or parts of same. E. J. BROWN, 820 20th St., N. W., Washington, D. C.

TO EXCHANGE.—A 12 bore breech loading gun and a lot of books. Will exchange for 32 Repeating rifle or eggs. SAM TAYLOR, Palestine, Tex.

SETS of American Redstart, Crow, Wood Pewee, Indigo Bunting and others to exchange. Common sets wanted, send lists. Several volumes of Argosy to exchange. Address, ARchie M. HOWES, 446 West 3 St., Erie, Pa.

WANTED.—Three fine skins of Bald Eagle, and 6 skins of White-winged Crossbill. For above we will give the very best exchange in anything we have for sale. Write at once.

F. H. LATTIN & CO., Albion, N. Y.

FIRST 6 parts (\$1 each) of Nehilng's North Amer. Birds, (complete in 12 parts with 36 colored plates) for eggs in sets. GUY A. MOORE, 1336 Wabash Ave., Chicago, Ill.

FOR SALE.—Collection reliquies, 12 fonts type and press, few minerals, etc., etc., cheap. R. M. DALRYMPLE, Baker, O.

SOUTHWESTERN eggs in sets with data for sale at 1½ catalog price, also will exchange same for a good collection of stamps or eggs in sets. Send list and receive mine. H. SAYLES, JR., Abilene, Tex.

WANTED.—Star tobacco tin tags in small or large lots. Can offer you in exchange for them Bird Eggs, Skins, Indian Relics, Shells, Stamps Old Coins, Guns, Revolvers, Watches or curiosities of any kind, taking tags at rate 3¢ each in trade. Write me what you want. HENRY DAVIS, North Granville, Washington Co., N.Y.

WANTED.—A repeating shot gun and Davies' Nest and Eggs, second preferred, if you have same write to me giving condition, good bargains, all answered. JOHN J. KINGSLEY, 10 Elm St., Rutland, Vt.

FOR EXCHANGE.—About 110 first-class birds eggs, contains Gulls, Tern, Hawk, Owls, and many desirable singles. Will exchange for printer's materials, type, etc. F. C. HUBBARD, Geneva, O.

A COLLECTION of rare Southwestern eggs, such as A. O. U. No. 8.339a, 341, 375a, 333, 433 and a great many others, all first-class in complete sets with data, 27 species, 117 eggs, catalogue value \$28.30. The first person remitting \$13 gets it. H. SAYLES, JR., Abilene, Texas.

FOR EXCHANGE.—I have for exchange one 28 inch, cushion tire, safety bicycle, ball bearing all around, to exchange for self-inking printing press, not less than 6x9, with type, this is a bargain for some one. F. C. HUBBARD, Geneva, Ohio.

FOR SALE.—I have 8 Botany collecting cans, regular price \$1.50; will sell for 75 cents each. Botany press, regular price \$3, will sell for \$1.50 to close out. These are all new. A few Davie's paper covered Nest and Eggs for \$1. C. F. CARR, New London, Wis.

EMUE and Ostrich eggs in exchange for other eggs, also California Murres eggs exchanged for common eggs in sets or singles. Send your list and best offer. A. E. LITTLE, 225 Market St., San Francisco, Cal.

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NO. 8

SCENES FROM THE LIFE OF ALEXANDER WILSON.

Journey to the Falls of Niagara.

G. VROOMAN SMITH.

V.

In the month of October, 1804, Wilson accompanied by two companions, Duncan and Leech, set out on foot to visit the Falls of Niagara. The journey there and back was performed in fifty-nine days at a late season of the year and through almost an uninhabited country. On his return he published in the form of a poem, entitled "The Foresters," an account of his remarkable journey. "The Foresters" commenced in the July, 1809, number of *The Portfolio*, a monthly magazine published at Philadelphia and continued through nine numbers. The poem possessed considerable merit, though strongly marked with the prevailing faults of his poetical style.

It was Indian Summer when Wilson and his two companions standing on the green banks of Schuylkill's winding flood bade their parting friends adieu for a tour through the northern forests, as the region lying between Philadelphia and Niagara was then called. They took their way northward through the old village of Germantown where but a few years previous the roar of the cannon signalized the strife for American Independence. The second day's journey lay through the fertile county of Bucks, where the pious Quaker leads a life of thriftiness and economy. The barren, sterile heights of Northampton county with the German's all-conquering industry, next came under the foresters' notice. Passing the town of Easton they pursue their course over

bare mountains till the high towering peaks of Blue Mountain appear in front, and whose steeps each traveller ascends. From the summit a vast extent of country lay in range of the vision, and that atmospheric deception so commonly seen in this region was equally deceptive to Wilson. He says "the effect of this deception was really astonishing. Nothing could be more evident to the eye—the shores, the waters, studded with numerous islands seemed to disappear as if by enchantment." While descending the rough mountain side a solitary hawk was seen sailing serene and eyeing the expanse below. Fluttering in its own blood at Wilson's feet, whose shot had brought it down, Duncane remaked

Thus falls many a son of pride

While buoy'd in thought o'er all the world wide.

On their way they perchance stray into a country school. The account of the schoolmaster dictated by Wilson's own experience is written with great truth and energy. They spent that night at a humble settler's hut far in the forest. The host spread before them the best his meagre store afforded, and made the evening pass quickly and pleasantly by relating his hunting and trapping adventures among the mountains. Before the sun arose over the eastern hills we again find our travelers shouldering their knapsacks and trudging along, now beside a noisy creek, now ascending a steep incline or pursuing their way through deepening swamps where large pines and hemlocks exclude the light of day. Near the close of the afternoon they were passing through an oak grove, when a black bear, so common in these mountains, was startled from his feast among

the sweet acorns, by the sudden appearance of the travellers. Both parties were equally surprised and frightened, for while the animal was crashing through the neighboring underbrush the hunters were fixed to the ground with surprise. Throughout the journey the three companions frequently experienced such hunting exploits as the above; and these coupled with midnight talks around a camp-fire in the lonely forest, or in some settler's lowly hut, made the journey one continued round of excitement and enjoyment. They kept on their march till the bird had sung its evening hymn, and then lying down to rest with no shelter but the star lighted skies.

They depended on their rifles for subsistence and many were the grouse and quail that fluttered in the dust at their feet from the effects of those deadly weapons. These highly prized game birds were much more plentiful in the woods at that early time than now. Few settlers had undertaken to carve a home out of the wilderness of Northern Pennsylvania, and these few were unacquainted with the destructive influence of the modern breech-loading gun.

They took their way through the valley of the Wyoming with its green banks, where the forest-wandering stream flows over broken rocks in whirling foam, and where in July, 1778, the iron-hearted soldiers of Butler, the tory and savage leader "I vow'd to the flames the weak submitting few." Thence they journeyed along the shores of the Susquehanna. "The river hemmed in by mountains," as Wilson called it. At that time few huts appeared on its banks, and he says that even those few were wretched ones and seemed more like caves where Sloth and Poverty reside than places where human beings dwell. While following the winding course of this river they encountered, amidst a mouldering heap

of logs one of those very dangerous reptiles so common in that part of the country—a huge rattlesnake. According to Wilson the snake was "three times three feet in length." Wilson quickly stepping back, levelled his gun and was about to end the reptile's existence at once when Duane admiring the quickness with which the snake threw itself into a coil preparatory to defend itself, entreated Wilson to spare its life, which he did, saying that it was unfair fight—one against three.

Ascending the Susquehanna the scenery is very varied. As they near the junction of the Chemung and Susquehanna, settlements become more numerous until they reach Athens which was then a small lumbering village. Leaving the river at the village of Newton on the Susquehanna, they proceeded across the country, a distance of about twenty miles to Catharine's Creek, a small stream forming the head waters of Seneca Lake. All day long they labored through the Great Catharine's Swamp which extends over a great area in the vicinity of that creek. Catharine Creek is navigable for about five miles from its mouth. On either side is a marsh to which multitudes of ducks and geese repair to feed while on their northern and southern migrations. While Wilson's two-companions went around the marsh to the east side of the lake, he procured the assistance of two boys and a boat and they proceeded along the creek towards the lake. At a single discharge of the gun countless numbers of water-fowls arose from the surrounding marsh and streamed down the lake in long files. His discharged his fowling piece with deadly effect and soon the bottom of the boat was filled. Towards nightfall they returned to the shore and examined the day's shooting. Among the spoils were canvas-back, wood, black and teal ducks, plover, snipe, divers, a white-tailed eagle, blue herons and two-

"snow-white storks," probably snowy herons and which he says in a foot note to his poem were "summer birds, and very transient visitants to these northern regions." The foresters then went across the country, a distance of eight or ten miles directly east to Cayuga Lake. There they purchased a boat, which they named "The Niagara," and went down the lake to Seneca river. Following the course of this river they enter Lake Onondaga, thence the Oswego river, and at last abandon their barge at Fort Oswego on the shores of Lake Ontario. At Fort Oswego they procured passage for Queenstown and at once embarked. While on their way a heavy storm came up which nearly destroyed the ship. Added to the uneasiness of a rough sea the three companions suffered severely from seasickness.

Arriving at Queenstown after being tossed for several days in a boisterous sea, they at once set out on foot for the Falls of Niagara. When Wilson and his companions beheld the stupendous sheet of falling water their expectations were more than realized. He was favorably affected by the sight of Niagara and it is interesting to observe how his favorite pursuit is associated with every striking scene. When he describes the cataract with its stupendous column of spray, he is not so much engaged with the grandeur of the scene as not to observe the eagle towering at a great height above.

After spending a few days at the Falls and vicinity they returned home through Central New York by the way of Albany and New York City, and arrived at Philadelphia after an absence of fifty-nine days.

Twice Used Humming Birds' Nests.

No one having replied to Mr. Campbell's suggestive article in the June OÖLOGIST, I shall take this opportunity

to venture my experience relative to Humming Birds' nests being used during a period of more than one season.

Some time previous I made note in THE OÖLOGIST of finding a nest of the Anna's Humming Bird which was remarkable in two points. Firstly on account of the exceptionally early date — Feb. 2—and secondly because it was a previously occupied nest, the young having been reared in it the year before.

This nest contained two very slightly incubated eggs.

It was very considerably enlarged. In fact it was the largest nest I have ever found.

Another remarkable nest is one in the college grounds. It is quite famous among the students, having been built three years ago and has been the home for three broods of young—one every year.

No attempt has been made to take it, probably because it would be exceedingly difficult to reach. It is placed on a very slender twig of a cypress tree about twenty feet from the ground and but a few feet from one of the college windows from whence the present bird can be seen patiently sitting upon her nest, and is greatly admired by the students.

The nest was repaired this year about the first of March and the young have left the nest long since.

Another preoccupied nest, which is the prettiest I have ever seen and is now in my collection, was discovered by me on May 26, 1892. It was on a slender moss-covered twig of a Linden tree, barely two feet above a creek. This nest contained two fresh eggs and was within four feet of another nest in the same tree, containing young.

The old nest is plainly discernable at the bottom and a little to one side of the new one. I wonder if it could be possible that the nest containing young belonged to the former occupants of the nest in question.

Everything combined to make this nest artistic and beautiful. The surroundings were pretty and the dainty little nest exactly harmonized with them. It is on a little bunch of moss and leaf fibres, which hang from a twig about the size of a slate pencil and the whole is under a mass of bright green foliage.

The composition of the nest is rather odd, too, I think. The inner portion is soft down from the willow. Then a thick outer coating of dark green moss and finally a maze of white cobwebs which hold the nest together and unite it to the twig.

Two other twice-used nests that I recall were both found this season, one by a friend and one by myself. These were Costas. The one discovered by me was in a dense cypress grove on a very slender twig, and was entirely remodelled as were all the preceding.

FRED A. SCHNEIDER,
College Park, Cal.

Notes On the Nesting Habits of the Scissor-tailed Flycatcher.

(*Milvulus forficatus.*)

Allied to our common Kingbird, this dashing member of our avifauna, has all of their boldness, reckless courage, pugnacity and persistent tenacity and I do not believe that there is another species whom they would fear to attack. The Scissor-tailed Flycatcher is an elegant bird, very showy and graceful, which coupled with its large peculiarly shaped tail, which is from 8 to 12 inches in length and shaped somewhat like a pair of scissors, make it one of the most noticeable birds of this locality.

The natives know it as the Scissor-tail or Paradise Bird and one young farmer informed me that they were *real Birds of Paradise, sure!*

They arrive in this county (McLennan) about the first of April.

My first observations regarding their

nesting habits were made in '91. On the 31st of May of that year I found a nest containing an incomplete set of three in a small tree in a plum orchard about one and a half miles west of Waco. This nest was built about eight feet from the ground. It was then that I noticed its fearless, reckless disposition, as when ascending the tree I was assailed by the pair who flew almost into my face, uttering their peculiar sharp cry and were only driven off after several attempts by my companion of the trip who brandished his buggy whip.

On the 7th of June of the same season I made another trip and examined many nests containing from a single to complete sets of fresh eggs, so I judge that the breeding season extends from the latter part of May to about the middle of July. I made several other trips in June but although I found many nests, few contained young.

I have only taken two sets for my collection. These are rather smaller on an average than those of the common Kingbird, are white or creamy in color, covered with blotches of rich brown and obscure purple, mostly at the larger end. The eggs of set No. 1 resemble those of *T. tyrannus* and the blotches look as though a whitewash brush had been lightly drawn over them. Those of set No. 2 are more rounded and the handsomest eggs of this species I have ever seen, though in the past few years I have examined probably a hundred.

The blotches are of a rich brown concentrated in a wreath around the larger end and are especially large in size and few in number.

I have never yet seen any pure white unmarked specimens, as I have seen noted, these probably being "freaks" something like spotted Robin eggs.

Mr. Singley of Lee county states that in his county the Scissor-tail nests in trees varying from 6 to 20 feet from the

ground. Mr. E. C. Davis mentions that in Cook county a favorite nesting place is in low mesquite on the prairies.

From my experience in Falls and McLennan counties I have found them nesting in rather low mesquite trees from 6 to 10 feet high; also in trees from 15 to 20 feet high that border on country roads.

The lowest nest I have ever found, however, was at a height of about five feet above the ground. The nests I have examined, several of which are before me now, are composed of a waxy weed, cotton, a few leaves, and in some a little grass. They are bulky and some are very loosely made. I suppose, however, that several other materials are used whenever they are found abundant in the locality in which the nest is built.

The usual nest complement is five, sometimes only four, and this season I found several sets of six.

During the breeding season should you notice a pair, which by the actions evinced great uneasiness, by walking off a short distance and carefully scanning the trees near by, their nests can generally be easily found.

The Scissor-tail is of a tyrannical disposition and seems to take great delight in the pursuit of crows and vultures whom they viciously attack. In 1891 I watched a pair pursue a vulture for over a mile.

They make frequent trips to the towns and their sharp cries and continual fluttering noise alarm cage birds almost as much as would the appearance of a White-rumped Shrike.

Another trait regarding the building of their nests I have noticed this year. Several nests I have found had a great deal of loose cotton and other materials hanging promiscuously from the twigs near at hand, giving the nest the appearance of an old one which had been partly torn down. This, however, could not have been the case as I had

carefully examined the same trees but a short time before and these ratty nests always contained the full complement of eggs. Could this have been done for a blind? It is quite an interesting sight to watch six or seven of these birds during mating in early April as they keep a continual fluttering and making peculiar revolutions and darts in the air.

J. K. STRICKER, JR.,
Waco, Texas.

When Preparing a Birdskin.

Make a clip across the skull between the jaws, from one eye-socket to the other; a longitudinal one on each side from this to the back of the skull; then connect these two by a cross clip of the skull just above the foramen magnum; remove the brain from this opening.

Always put a small stick covered with cotton in the neck. The stick should extend some distance back in the body.

Never put the skin in a paper cylinder. It will make it look like anything but a bird. Take a thin sheet of cotton, lay it on a board, and by putting strips under the edges of the sheet, make a trough to fit the skin. Lay the skin in, breast up, and arrange it.

These suggestions have come to me after handling thousands of skins.

J. O. S.

How a Canon Wren had Revenge.

In a large room of an adobe building used as the office of the Silver Mining Co., in south western Chihuahua, Mex., on the edge of the wall just under the roof, a Canon Wren had the audacity to build her nest. I was after eggs myself, so I permitted the nest to be completed and a full complement of eggs to be laid therein, then they became my property, much to the discomfort of the builder. Nothing daunt-

ed, a second one was at once erected on the site of the old one and another complement of eggs became my lawful prize. The bird looked down with some disdain upon such unruly conduct on my part, and seemed to convey the idea by excessive whistling that I must not do that again, but I did, and was only too glad of the opportunity. Then the fun began. My desk was on the opposite side of the room by a window, and whenever that wren would spy me writing, she would perch herself on the edge of the wall overhead and scratch dirt down on my book in such quantities that I was eventually obliged to pull the desk out into the room far enough to be out of her reach, nor would all the throwing of beans or small gravel at her keep her from venting her spite on me for having robbed her out of house and home three times in succession.

E. WILKINSON,
Mansfield, Ohio

Nesting Habits of the Hades Plunger.

BY SHEOL DIVER.

This bird is properly known as the Grebe, and also as the Carolina Grebe, Pied-bill Grebe, Dab-chick, Die-dapper, Spirit Duck, and by at least a dozen other names.

Profanely, it is often called, and too, with a degree of grim irony, as well as facetiously—Hell Diver. This is the name it invariably goes by among the boys, and with most of the residents of the country. We might also term it the Sheol Plunger, or the Gahenna Diver, but we prefer to keep up with the times, and therefore, in accordance with the latest authority in infernal names, namely, the revised edition of the Bible, we will call this bird, and so let it be accepted, as **HADES PLUNGER**; otherwise as *Podilymbus popiceps* according to American Ornithologist Union *selah*.

The Hades Plunger is a very easy bird

to kill when you hit him, but he is decidedly hard to hit, and, in fact is seldom hit in my neighborhood. For he is a most elusive chap, and can dodge any number of bullets with ease, provided the shots all come from one direction, and he has his weather eye open to visitors. It is safe to wager ten to one that a good (hell)thy Hades Plunger on a lake can escape from a single hunter either on land or in a boat every time. It is only by sneaking and shooting at an unsuspicious bird, or by surrounding one on the water, that this wary diver can be taken. When several hunters are firing rapidly at sir 'H. P.' from different directions, it is but natural that the wary bird should get 'rattled' and at last fall a victim. There are occasional instances when a collector secures a bird very easily and without sneaking, but these opportunities are rare and grand exceptions. It is customary for collectors thus favored, to immediately proclaim that divers are very easy to kill. The chances are, that the bird was an immature, and had not yet cut its eye-teeth, and was not fully educated. I can safely say that for its size, the H. P. is the most difficult bird to kill that I know of. It will dive at the flash and escape when less than thirty feet away from the hunter, as I have repeatedly proven. Like the 'Irishman's flea,' he is not there when you think you have him.

I once nearly cornered one in a shallow place at the edge of a mill-pond, and had an opportunity to observe its actions under water. It used its wings as a means of propulsion and might be said to literally fly under water. Its wings beat in a regular motion, while its feet moved alternately as with all other swimming birds.

I have taken much pleasure in studying the breeding habits of this species, and found that it nests in many situations where its presence was not suspected. Its habits can only be observ-

ed at the expence of much time and by using great patience. In a great many reedy-shored lakes and ponds here in the southern part of the Lower Peninsula of Michigan, these birds may be found breeding. In fact, whenever found consorting in the months of June and July, it is reasonable to expect that they are nesting in the immediate vicinity and probably on the same pond or lake. This diver is but very little given to flying except during migration and I have but rarely observed its flying about during the nesting season. The Great Northern Diver often feeds on lakes several miles distant from the small lake or pond on which it builds its nest, but the Dab-chick is nearly always found about its nesting site.

The song of the common Hell-Diver is well known to most collectors, and by it the egg-hunter may be attracted to the mud hole where the birds are nesting. It is entirely different from all other notes with which I am acquainted. But though so peculiar, I cannot describe it satisfactorily.

Nests have been found at the edge of mere mud-holes not over a half acre in extent. Then again I have found nests at the edge of large interior lakes. As a rule, however, the birds seem to favor small lakes or ponds which are more or less covered with lily-pads and surrounded with marshy borders.

The spot chosen is never situated like that adopted by the larger relative, the Loon, but is always near shore or right on the boggy margin. In such a location a mass of matter is accumulated, formed principally of decayed and sodden grass, rushes, reeds and weeds. This mass is generally more or less supported by the natural accumulations found in stagnant bodies of water, but sometimes the mass floats, I am informed. In all nests that I have seen the structure was anchored by rushes, roots and other material or more often was situated on a comparatively firm founda-

tion like the bog which holds the eggs of the Loon. In, or on this mass of vegetable material, mixed with mud and ooze from the bottom of the lake, the eggs are found. The structure, or mass, for I cannot call it a nest from any appearance or resemblance to any nest that I have ever found, is always wet and soggy and to me is about the most uninviting place possible for a bird to deposit her eggs in.

The Hades Plunder, however, evidently thinks the situation salubrious, and on this mass of rotting material the eggs five to eight in number are laid.

Six eggs is the usual number I believe, though seven eggs is not rare, while many nests are found containing but five. I have never found a smaller number in a completed set. The earliest date of finding a complete set was May twentieth. These eggs are generally of a dull yellowish, white or bluish white, when first laid, but soon get daubed and bernished with the mud and rotting vegetable material with which the set is covered whenever the old bird leaves the nest. Often the eggs which are covered more or less thickly with a coating of calcareous deposit, is tinged with a very fair blue coloring, sometimes nearly equaling the blue of a black-billed enkoo's egg. This variation in external coloration is not found in more than one in fifteen eggs. If the chalky coat is scraped off, the proper color of the eggs may be seen nearly always bluish, and it is my advice to collectors to scrape one or two eggs in a set to show the true inner color. We may compare the work to the polishing of shells, which, while it decreases their value, as considered by the naturalists, certainly enhances their appearance, and assists in beautifying the cabinet.

The last of May or early part of June is the time to secure complete sets of eggs. I have four sets of six and one of seven eggs taken May 31, 1888, and

also many eggs which were found in June. They may be taken as late as the middle of July.

The Hades-Plunger is rarely seen running about its nest, and if it is observed on the same sheet of wafer, it quickly becomes aware of our presence and conceals itself. A careless collector may visit a lake or pond and think that there are no birds there, when there are ten to twenty pairs of birds within a short distance, and as many nests about the margin of the water which we think uninhabited.

Coming suddenly upon a Hell-Diver in nesting season it will be seen to disappear; after which it will rise to the surface once or twice, and then apparently leave for good. Where it goes to, we can only conjecture, but it is reasonable to suppose that it seeks the reedy edges, from which secure position it is undoubtedly watching our movements. Its nest is probably close at hand, but unless one has had experience or information on the subject, it is absolutely unless to search for the eggs, for I assure you that there are no eggs in sight.

For a great many years I looked for the Grebe's thick shelled eggs in vain. I knew, in a vague way, that the nests were about, but I failed to find them, try as I would. Finally I learned from some professional frog-eatchers for the city markets, that the birds left their nests during the warm days and covered them over to screen them from inspection and possible spoilation. All complete sets of eggs that had been found, were thus concealed, but in two cases where the sets were incomplete, namely, one and three eggs, the eggs were left unprotected of covering. It may be that the covering of the eggs signifies an effort on the part of the reasoning birds, to assist incubation, while temporarily absent. At least it is not proven that the covering to the set is solely for purposes of concealment.

Then again, if this habit of covering the eggs does answer a purpose in maintaining a proper degree of heat, why does not the Loon also cover its eggs, which are equally exposed and in a correspondingly low situation.

Thinking to satisfy myself partially in regard to the matter I took the temperature of the surface water near a Grebe's nest at the edge of a pond. The mercury indicated 74 degrees Fht. while the atmosphere sun temperature was 107 degrees. The debris which covered the eggs felt warm and moist to the hands. In fact I tried to convince myself that a degree of heat was generated by a seeming fermentation, or a possible chemical action produced by decaying vegetation. We are told that the eggs of the Mound-building Megapodius are hatched often in this manner of incubation.

Then again I have felt that the Grebes cover their eggs to protect them from the fierce rays of the sun, and this explanation may meet the views of some of the readers. Certain it is, that of all the nests I have heard of, not one of the complete sets of eggs was left completely uncovered. As referred to above some incomplete sets are found which are left uncovered. It may be that in these cases the birds were surprised, and driven away while about to deposit additions to the sets of eggs, but it may seem reasonable to think that the birds cover the eggs for other purposes than that of concealment. If concealment was alone intended then it appears to me that the birds would cover the eggs before the set was complete.

Two frog-eatchers told me that they found over fifty nests in a couple of days about the edges of lakes and ponds. This appears to be a rather big account but I cannot dispute it, as I am aware that the birds breed commonly, and too, in places where their presence is not suspected.

But notwithstanding that this Grebe is so prolific a layer and although it can so carefully conceal its nest, still the species does not seem to increase in numbers, and this circumstance, like many another example of similar character among our birds, affords me food for reflection and wonderment.

THE OÖLOGIST,

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and Items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

The Birds of Michigan.

The zoölogical branch of the Michigan Agricultural Experiment Station of the State Agricultural College recently issued a list of the Birds of Michigan. The work is a pamphlet of 150 pages and is edited by Professor A. J. Cook of the college at Lansing, Mich. Professor Cook with his large corps of

co-workers has presented a very accurate and complete list, with copious quotations, to the public. The notes are most interesting concerning the food of birds, and the habits of several beneficial insectivorous species are well shown by careful experiments.

The list, which may be accurately called a compiled catalogue of the birds of the Great Lakes, embraces 332 species, and is the most complete list ever issued in the Peninsular State. It speaks of the meeting habits and movements, and describes the nests and eggs of our birds. No one living in this state or adjacent states who is interested in our *avian fauna* can afford to be without this assistant.

There is, in the front part of the work, a very complete bibliography on the subject of Michigan ornithology, which speaks of all the published lists and articles from Schoolcraft, 1834 down to '93. A large percentage of the birds treated in the work, are illustrated by exceptionally good cuts.

SCOLOPAX.

Something More About Loon's Eggs.

BY ABOUT 40 DEGREES NORTH LATITUDE.

The present season has been a fair one for Loon's eggs and I send you a few more notes on the nesting habits of this interesting bird.

An acquaintance of mine came to the city with a gripsack packed with excelsior and Loon's eggs. The lot of eggs were for sale, and were to be sold cheap for cash. One could buy the lot for a song, but there were no takers as we were all supplied. I have five good sets and the other collectors have each from two to six sets. So in this case this man who had collected the eggs for the money, found the market glutted and therefore "carried his coals to New Castle," so to speak, in coming here.

Among the eggs he had three sets which were taken from one nest on Wall Lake, twenty miles' distant. The dates of capture were April 28, May 16 and June 6. Two of these sets much resemble each other, while the other set was quite different. However, as two pairs of birds would hardly occupy the same nest the same season, it is reasonable to suppose that the same bird laid the six eggs. It will be seen on counting the days that nearly the same interval occurred between the deposition of the sets. This note will also give an idea of the lateness of the possible nesting of the Loon, which is a species which never lays a second time in one season if unmolested.

Kalamazoo, Mich.

Nesting of the Mountain Plover.

The Mountain Plover builds its nest on open prairie. The first egg is laid on bare ground and as the set is finished and incubation advances the bird gradually makes a nest of dirt, pieces of hard grass, roots, etc. It takes five or six days to complete set of three eggs. I have never found more nor less than three eggs in a nest that I thought complete. Old birds will fly off the nest while a person on foot is 80 rods away but will sit closely for man on horseback or in a buggy. Very young birds resemble pieces of walking plush and stay with the old birds all summer. Only one brood in a season.

H. G. HOSKIN,
Beloit, Col.

Barred Owl.

On March 28th, 1891, I found a nest of this bird. He is quite rare in this county. The nest was in a patch of woods near a farm and placed in a large chestnut tree about 40 feet up. The hollow in which the nest was placed was quite shallow. The nest was made of

sticks and leaves matted firmly together with a few feathers for lining. The hollow of the nest was four inches deep and 1 foot across. It contained 3 eggs which would probably have hatched in a day or two. The hole was not inhabited last or this year.

H. T. GREENE,
Montclair, N. J.

The Cooper Ornithological Club.

The above club was organized in San Jose, California, June 22nd, under auspicious circumstances. The following officers were elected for the coming quarter: President, W. H. Osgood; vice-president, H. R. Painton; secretary, C. Barlow; treasurer, F. A. Schneider.

The object of the club is the mutual study in Ornithology, and it will meet every two weeks. We are desirous of having the assistance of all honest ornithologists, and invite those residing in Santa Clara or adjacent counties to join us. Those wishing to join will please correspond with the President or Secretary.

C. BARLOW, Secretary.

The History of a Cowbirds Egg.

It was on the 9th of June '91, I placed a fresh egg of the Cowbird in the nest of a Chipping Sparrow containing two of her own that had an advance of one and a half days incubation over the first. I watched results. About the 19th, Mr. Cowbird emerged from his prison walls, large and vigorous. A day later a little Sparrow came fourth from his delicate shell, but much smaller, and exhibiting less strength than his foster-brother. The other egg failed to hatch. The daily increase in dimension of the Cowbird was something immense, while that of his younger companion seemed rather to diminish than enlarge, until finally, at the end of three

days, he died—evidently for want of food—as the Cowbird, being larger, greedily devoured everything that came in contact with his capacious mouth. The untimely end of the rightful heir was but gain to this usurper, as he now received the whole attention of the parent birds. Nature having now, at the early age of seven days, provided him with a respectable dress, he was no longer contented to remain within the small compass which the nest furnished; whereupon he betook himself to the branches of the tree in which the nest had been placed. But soon this area became too limited for his ambitious spirit; for at the end of his second week he was flitting from bush to bush, exploring the fields and hedges, his parents providing for him all the while. Two weeks more and he was a full fledged bird. About July 20th I saw him for the last time. He was ensconced in the foliage of an orchard tree, chirping defiantly, and assuming all the air and dignity of a king's son. His parents were still administering to his wants, and following at his command. Thus in less than six weeks a fragile egg had developed into a worthless paasite.

M. A. WHITE,
Mathews, C. H., Va.

Black Tern.

Did you ever hunt for Black Tern eggs? These birds are very numerous in the Calumet Lake region, but the territory in which they nest covers so large an area that it is almost impossible to find the nests in any quantity, unless one has had experience.

When you first come upon the marsh, a Black Tern is sure to espy you and in a short time, a shrieking, screaming mob is circling around your head, seemingly frantic in their endeavors to drive you away. The first impulse is to look for the nests, which you feel sure, must be close at hand. But your search is un-

availing, with the exception, perhaps, of an occasional set. You then observe a number of birds hovering over a spot, perhaps a quarter of a mile distant, and after floundering through the heavy mud of the slough until you're almost exhausted, you find that the birds are merely feeding and the water is too deep for nests.

The flock still follows you, and you still search in vain, but after a time the birds pay you less and less attention until finally, only an occasional new arrival deigns to notice you and you go away, thinking you are too early for nests, and that next time you will find them breeding abundantly.

But the terns have outwitted you. When you came to the marsh and they rose to meet you, you should have noted carefully the spot from which some one of them seemed to arise, and then walked to the spot, stooped down, and remained perfectly still. Soon you would have noticed a bird, alternately diving at you and at a particular spot near by. Having marked the spot and proceeded toward it without allowing your eyes to be for an instant withdrawn, you would have discovered, in nine cases out of ten, a small mud bog, scarcely above the water-line, and on it, two or three dark brown pyriform shaped eggs, lying close together in the mud, with perhaps a few blades of grass beneath them. You should then crouch again and repeat the operation until you have discovered five or six nests, after which it would be better to move on until another colony is started up. In this way I have found, in a single day, over a hundred nests.

A severe rain is very destructive to the terns, for a rise of an inch in the water will drown out two-thirds of the nests. It is a wise provision of Providence which has made the incubation period short, and enables the downy youngsters to swim as soon as they roll out of the egg. W. E. PRATT,
Lake Forest, Ills.

Peculiar Habit of the Woodcock.

One evening, about dark, as I was returning from a walk in company with a couple of friends we flushed a bird that puzzled us. It rose off the ground, flying with a twittering noise and constantly rising in a spiral till nearly out of sight; then descending in the same course, it emitted a pleasant song. The song was peculiar but indescribable. When I heard it I thought of sky-larks though I had only read descriptions of their song. The next evening we secured it. It proved to be a fine male Woodcock.

The Secretary of the Indiana Academy of Science writes that the habit is not *unknown*, but is not at all common even where the Woodcock is more common than here. It is probably to attract the females at the mating season. I hope to hear from others on this subject.

ALEX BLACK,
Greencastle, Ind.

The Plumed Partridge.

The Plumed Partridge *Oreortyx pictus plumiferus*, inhabits the mountainous region of Southern California. In summer they are found in high altitudes, but in winter they are driven down to the foot hills by the heavy snow. Their food consists of various kinds of seeds, berries and grasses. They breed in high mountains "not below 4000 feet" says Davie. Their nest is composed of leaves and grass. Their eggs are creamy buff in color and from 8 to 20 in number. I am unable to say from personal observation at what time of year they commence laying, but Mr. Smithson tells me that it is from the first till the middle of April. The old bird can be decoyed by a series of short whistles much the same as the call of a young turkey. Perhaps a short general description would be desirable.

Above olive brown, top of head, side of neck and whole front half of under side leaden blue, chin belly and under side of neck reddish brown, Flanks of the same color but with end of each feather white. Under side of tail dark brown.

In July and August of 1892 I found them in abundance at Strawberry Valley in the San Bernardino Mts., their haunts were in the bushy canon and flats that contained a creek or spring. Their chief food here was the seed of a kind of wild rye and also a short bunch grass that grew around the water. Mornings and evenings they come out on the flats to feed and water while in the middle of the day they stay in the dark canon. Their roosting place was a bush or tree high enough to be out of reach of any dangerous animals.

EDWARD WALL.
San Bernardino, Cal.

The Long-crested Jay in Colorado.

BY A TENDFRFOOT.

Although the Long-crested Jay (*Cyanocitta stelleri macrolopha*) is very abundant in the locality where the following notes were taken, its nest is, comparatively speaking, very seldom found. The observations given below were made in the neighborhood of Florissant, Col., which is about twenty miles north-west of Pike's Peak and has an altitude of about 8,800 feet.

The surrounding country is, for the most part, composed of well wooded hills, and, as the Indians burned the whole region a good many years ago, the growth is comparatively new. As reminders of former days, innumerable dead pine stubs still stand which are frequented by Woodpeckers, Sparrow Hawks, Nuthatches and other birds that build in similar places.

The trees are principally evergreens with large patches of quaking asp-

sprinkled about, but the former trees are where the Jay in question loves to frequent during the breeding season.

The nest is usually placed in a tree resembling the pitch pine (*pinus rigida*), though I am inclined to think that, like their eastern relative the Blue Jay (*Cyanocitta cristata*), they not infrequently build their nests in any of the other coniferous trees with which the country abounds.

The distance of the nest from the ground varies from twelve to twenty feet, though, of course, there must be extremities both ways.

The eggs are usually laid about the last week in May, and are usually four or five in number. I think that a description of a nest and set of eggs taken May 21, 1892, will furnish sufficient particulars to suit the purpose of this article.

The nest was placed twenty feet from the ground in a pitch pine and is a typical one of the species. It is (with the exception of the general nature of the material used) altogether different from that of the Blue Jay, being at least three times as bulky as an average nest of the latter bird.

The material consists outwardly of a substantial lair of twigs of the quaking asp and has a lining from an inch in thickness in some places to an inch and a half in others, composed entirely of rootlets which are very neatly interwoven so as to form a hollow in which to place the eggs. Despite this bulk of material it would, with the exception of the lining, almost instantly fall to pieces when taken out of the tree, if not held together in some manner. Externally it measures 8 inches in diameter \times 3½ inches in depth; the cavity is 3½ inches in diameter \times 1½ inches in depth.

The eggs which were four in number (one was unfortunately broken,) do not at all resemble those of the Blue Jay. They are of a light blue ground color having *very* faint tinge of greenish

They are spotted at the larger ends quite thickly with greenish brown, having spots and dots of the same color scattered thickly over the entire surface. The peculiarity in the markings is that very few of the spots are larger than the head of an ordinary pin. This is very different from the eggs of the eastern bird which, as is well known, have large spots and often blotches all over the egg. The dimensions of the four eggs in this nest are subject to slight variation. The largest egg measures 1.20x.86 inches; the smallest 1.15x.82 inches.

To make sure of the identity the parent bird was shot and is at this moment posing before me in company with a Blue Jay from Massachusetts.

This handsome species seems to be about as thoroughly detested by the ranchmen who keep hens as are the hawks, for they can easily outclass a hen at eating her corn and the only way to prevent their doing so is to watch the hens or shoot the Jays and the latter method is usually adopted, when possible, as the surest. They are bolder than any other bird I know of and have fully as much intelligence.

My first call at my next-door-neighbor's cabin was about as amusing as anything I have experienced in the ornithological line. I was sitting at the door of the cabin watching him feed his chickens and he had no sooner finished and come back to me, when three or four Jays swooped from the neighboring trees into the midst of the chicken's food.

I innocently asked him if he thought the chickens would get their share. At this he turned round, and seeing them, he expressed his opinion of them in remarks more forcible than polite and ended by saying that, although he had shot more than he could shake a stick at, there was always just the same number at each meal. I noticed that these particular birds were always off like the wind the instant the door latch rattled.

Hash.

How many of us remember, with an amused smile, our first attempt at making a collection? The badly blown eggs which fell a prey to mice and insects, the famous holes in the ends, the large number of species we had, many named from the shape, size and coloration of the eggs, and the very common varieties of which it was composed. Yet to this last there were exceptions, and notable ones, too. I had eggs in my collection then which I should consider very precious now if I had preserved them. Among them was part of a set of Burrowing Owl, the only one I have known to be taken this far east. The way it was discovered is as follows: A friend informed me that he had found the hole of some animal and requested that I go with him to dig the mammal out. I went. We found that there were two holes, one quite large and another considerably smaller. We dug in the larger one first and found nothing, then turned our attention to the other. A train of cow dung, with traces of the bones and fur of mice made it evident that the hole was inhabited. The length we dug is somewhat obscure in my mind just now, but I should say some two and one-half or three feet, when we came to a number of nearly round white eggs. These, we at once decided, had been carried there by the animal which (we supposed) lived in the hole. So, after carefully taking them out we dug to the end of the hole but found nothing else. Somewhat disappointed we divided the eggs, he expecting to set his under a pigeon and I to prepare mine for the collections of my brother and myself. Well, his never hatched and ours fell victims to the mice and the *enfant terrible* of the household. Had I them now they would be considered valuable as representing extreme eastern nesting of the Burrowing Owl, for from subsequent

study I have learned that they certainly belonged to that species.

At another time I made a trip to the Little Sioux River, some ten miles west of my home, and found several varieties of eggs before and since undiscovered, as I have had no opportunity of visiting the place since. One of these was the Rose-breasted Grosbeak the other two Vireos, species unknown. All were destroyed, one of them being broken by the too tight squeezing of the irrepressible man who *will* handle our eggs when they are shown him.

However the most valuable of the eggs I once had was a set of four albinos of the Black-throated Bunting. They were taken after I had begun scientific collecting, but owing to considerable advancement in incubation I was able to save only two of them. These repos'd in safety in my cabinet for some time, but by some mishap they were ruined and only one badly cracked specimen is left to represent a very rare set of eggs. I say *rare*, because I have never heard of a similiar set.

But this article was to be a sort of hash, and I have mixed in a rather large portion of one substance. The next ingredient must be ruuit eggs. Of these I have several. One is of the Kingbird, taken with two full sized ones from a deserted nest of the Blue Jay. It is smaller than the smallest Flycatcher's but not quite so small as a Hummer's. Another is of the Downy Woodpecker, comprising part of a set of five from Ohio. Then there is one of the Prairie Hen, part of an original set of fifteen, and those of the domestic species too numerous to mention (or keep).

I have in my collection a fine set of two eggs of the Sandhill Crane. They were taken in Palo Alto Co., Iowa in June, 1891, by one of my father's herd boys. Incubation was far advanced and I should have been unable to save them but for the use of an article which

should be, and is rapidly becoming, universally known to collectors, viz., caustic potash. A solution of this injected into the eggs soon destroyed the embryos and made them as easy to blow as though they had been filled with water. This is the only set I owe to the use of that chemical.

I well remember the only nest of the Sandhill Crane I ever found. It was when I was very small, about ten years old I think. My brother and myself were herding cattle, and while walking near the edge of a slough I saw what appeared to my juvenile vision to be a red bird perched upon a large sedge. It was in reality the head of a female Sandhill Crane who was setting on her eggs. When we approached she left the nest, half running, half flying, and stopped a short distance away. We secured the eggs, which were laid on some dry grass that had been placed upon the top of a half decayed muskrat house and then turned our attention to the owner of them. She was very fearless and would not leave us farther than a few rods while we stayed near the nest.

My undeveloped mind conceived that here was a good chance to cover myself with glory, so repairing to a neighbor's near by I borrowed a gun, pretending that it was for my father; one barrel was loaded and after approaching as near as possible to the Crane I deliberately placed the stock *under my arm* took a careful(?) aim and fired. Bloodshed resulted but it was from my nose, which was minus a large patch of epidermis while the Crane was unharmed. The eggs were taken home and placed under a goose and in due season one young Crane came forth and was gorged with angle-worms till it died. The Sandhill Crane has been successfully reared however.

In 1889 I took three sets of Traill's Flycatcher from the same pair of birds. The time of nest building and complet-

ing the set was just two weeks in each case, and the birds reared a brood in a fourth nest which I did not discover till the young were quite large.

How is that for perseverance. Have found nests of this species around the same grove each year since, but nowhere else, so I concluded that this pair of birds have made it their permanent home.

On July 1st of this year I took a set of four *perfectly fresh* eggs of the Black-billed Cuckoo. Is this not rather unusual?

There is one little point with regard to listing eggs that I have never seen mentioned, and yet I think it should be. It is this: when you have several sets of some species, each containing the same number of eggs, say four, do not list them, as nearly all collectors do, after this manner, 1-4, 2-4, 3-4, etc., but if the number of sets is three make them at once 3-4, i. e., three sets of four eggs each. If the collectors would all adopt this plan, as many already have, it would save some confusion and a great deal of time and space.

I have never tried the water-blower which is so popular at present, but blow my eggs by a different method, which has been very nearly described before. I procure a common family syringe and one of Lattin's brass blowpipes. The blowpipe I fix stationary, so it cannot move sidewise, up or down, but can be turned. The end of the syringe I insert into the blowpipe and am ready for work. The syringe, if a good one, will, when the bulb is compressed, readily force a current of air or water through the point of the blowpipe, and the apparatus can be used for either a water or air blower. I prefer air. This does away entirely with the use of the human bellows, and makes the task of preparing eggs, recently so formidable as much a pleasure as a task.

The fate of this article will decide

whether the editor of the OÖLOGIST or the waste basket has the greater appetite for hash.

JOHN V. CRONE,
Marathon, Iowa.

The Carolina Wren.

This is the most numerous representative of this beautiful family in this part of the year (March.) It raises two broods every year, nesting very early in Louisiana. I collected a set of four partly incubated eggs on March 16, 1893. Later the House Wren exceeds its cousin in abundance. I found a set of five eggs on March 24 1893. These are the earliest on record for this vicinity, I think.

H. L. BALLOWE.
242 Prytania St., New Orleans, La.

A SET OF FIVE OF THE PRAIRIE HORNED LARK. On April 12, 1892, a friend and myself started on a search for eggs of this species. Our first find was a very exceptional set of five normally colored eggs, which on blowing proved slightly incubated. This is the first set of over four I ever found, and find three more commonly than four in this locality. We were afterwards rewarded with two sets of three each.

J. H. BROWN.
Davenport, Iowa.

BARTRAMIAN SANDPIPER *Bartramia longicauda*. This typical species of our western prairies, commonly called Field Plover, nests from May 1st to July 1st in this latitude. I have always found the nest protected and placed on the ground in a bunch of grass, on high prairie.

DR. W. MORGAN MARTIN,
Wellington, Kans.

On April 12th of this year I secured a nice set of three eggs of the rare Spotted Owl. The nest was situated in a cottonwood about thirty-five feet

up on a horizontal limb. The cottonwood stood in an open grove or with a few other trees near the river. The bird could be plainly seen as the nest was rather small. The nest had been built by the birds and was composed of dead cottonwood sticks and bark strips lined with feathers from the parent's breast.

EDMUND HELLER,
Riverside, Cal.

A Mammoth Egg.

"We now come," said Mr. J. C. Stevens, at his auction-rooms in King street, Covent Garden, says the Pall Mall Gazette, "to the egg of the *Aepyornis maximus*, the biggest bird either living or extinct. It has been extinct for some time, and only two of its bones have been found. According to the catalogue the bird was more than ten feet high and was flightless."

"I should think so," said a prospective egg-buyer.

"It would seem to me," said Mr. Stevens, "that the bird that laid this egg must have been something like 35 feet high—about as high as a house. You will see by the catalogue that it measures 8½ inches in its longest circumference and 28 inches in girth. This egg is several inches larger than the egg we sold last year. It is, of course, a great rarity, and not more than thirty of these eggs are known. This I think, is the finest egg of the lot. It should be remembered that there are sixty known eggs of the Great Auk, and they sell for 200 guineas each. I don't mean to say that this egg should bring as much as a Great Auk's egg, but we sold one not so good as this last year for 70 guineas."

The egg was passing from hand to hand in a wooden box while the auctioneer was speaking. It looked too large for an egg though in other respects it seemed natural enough. It was not difficult to understand how a bird that had laid such an egg had become extinct. The egg is of a brownish-gray color and sounds like porcelain when it is drummed on with the knuckles. The bird that was accustomed to lay this egg lived, it is said, in Madagascar and buried its egg in the sand. It is only possible to find the egg by digging in the sand, and more eggs may yet be found, as a good deal of the seashore of Madagascar has not been dug up yet.

The egg was finally sold for 67 guineas.

June Contest.

Prize winners and credits received by each were as follows:

1. A trip for Loons' eggs. 208.
2. Taking the Eggs of the Peregrine Falcon. 206.
3. The embry Oology of a Bird. 109.
4. Wilson and Bartram. 95.
5. Floridan Races. 77.

The article World's Fair Notes was awarded one year's subscription.

Below we name the winners of the Judge's prizes and the order in which they named the winning articles in their decision. Only one party named them in correct order.

1. No. 52—W. Ambler, Cleveland, O.
1, 2, 3, 4, 5.
2. 37—I. H. Stratton, Toulon, Ills.
1, 2, 3, 5, 4.
3. 6—W.F. Mountain, E Orange, N.J.
1, 2, 5, 4, 3.
4. 10—W. G. Van DeWster, Gretna,
N. Y. 1, 2, 4, 3, 5.
5. 46—Geo. Dowell, Austin, Tex.
1, 2, 5, 4, 3.

The 3rd prize was awarded to Mr. Mountain as his vote was received here prior to Mr. Dowell's.

The following were awarded a World's Fair Almanac.

- J. E. Houseman, Ont.
- L. B. Gillett, N. Y.
- E. Doolittle, O.
- A. Lohman, Wis.
- R. McPherson, Mass.
- I. S. Griffing, N. Y.
- C. Luther, Ark.
- B. Rodwell, N. Y.
- H. L. Vandgrift, Pa.
- T. Morrison, Ark.
- A. W. Bayliss, Ia.
- P. P. Norris, Kan.
- E. S. McGowan, Minn
- T. A. Smithwick, N. C.
- E. T. Murk, Me.
- W. H. Sutton, Md.
- L. R. Kerk, Jr., Md.
- B. S. Bowdish, N. Y.
- H. L. Heaton, Kan
- C. Barlow, Calif.
- W. S. Graham, Ill.
- F. A. Andrus, Ore.

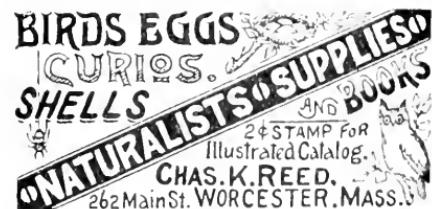
FLAMINGO SKINS.

We have doubtless the finest lot of skins of these elegant birds ever brought into U. S. Every one is perfect and guaranteed to please. Prices range from \$8 to \$15, according to brilliancy of plumage or from \$15 to \$25 per pair, the latter figure being for the finest selected specimens. We also carry a full line of skins in our Chicago store, Douglas Arcade, 3571 Cottage Grove Ave.

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YOU can coin big money. Bran new plan. Great craze. Just out. "Good side line." Biggest chance ever offered agents, salary or commission. Be quick. Goods on credit. Samples, etc., free. MULPLEX CO., No. 171 8th and Locust, Phila., Pa. Department No. 171, Philadelphia, Pa.

PRINTING Of all kinds for Naturalists a specialty. Note and letter heads, envelopes, circulars, illustrated catalogues for natural history dealers. Have hundreds of engravings of natural history specimens. Write for estimates. 100 envelopes printed, 45c, noteheads same price, postpaid. C. F. CARR, Job Printer, New London, Wis. *(ti)*



ONLY DIRECTORY on Earth guaranteeing 50,000. For only 40 cents regular price 25 cents, your name, if received within next 30 days, will be boldly printed on gummed paper, and from Publishers, Manufacturers and others, you will receive hundreds probably thousands, of valuable Books, Samples, Papers, Magazines, etc., **ALL FREE** and each paired with one of your boldly printed addresses pasted thereon. **EXTRA!** We will also print and prepay postage on 500 of your gummed addresses to you, for your personal use, which are valuable to stick on your envelopes, books, etc., to prevent their being lost. RIVERSIDE, N. C., Dec. 6, 1891. DEAR SIRS: My 500 addresses received, from my 25 cent address in your Lightning Directory I have received over 3,000 parcels of mail. My Addresses you send to leading publishers, manufacturers, etc., are arriving daily, on valuable parcels of mail, from all parts of the World. J. A. WARL.

THE LIGHTNING DIRECTORY CO.

Department No. 141, Philadelphia, Pa.

Fair and Resort Goods.

Parties desiring to make an exhibit at their County Fairs or Resorts should consult our prices, before buying elsewhere.

We carry the largest stock in Chicago—of Shells, Shell Boxes, Spar Jewelry, also Agate and Sea Bean Jewelry. Fine Paved Agate Goods, Curios both Land and Marine, and Corals of all kinds. We can put you up a good assortment for Fair or Resort from \$25.00 to any amount you care to invest. Write us at once if you wish to make an exhibit.

We would invite any persons living near Chicago to visit our store at 3571 Cottage Grove Ave., and select what they desire.

Parties anywhere within 500 miles of the city can save their actual expenses if they wish to buy this class of goods.

We expect, during the next three months, to handle more stock in this line than any two Wholesale Houses in United States.

F. H. LATTIN & CO., ALBION, N. Y.

AUDUBON'S BIRDS OF AMERICA

Life-size pictures, beautifully and accurately colored from nature.

Plates for sale separately, for framing.

Full descriptive catalogue sent FREE by

**Estes & Lauriat,
BOSTON.**

Niagara Falls.

Hundreds of the Readers of the OOLOGIST will visit them during the World's Fair year and they should make it a point to visit

TUGBY'S NEW MUSEUM.

This new museum is located on Falls street, only a few steps from R. R. Depots—Electric car line passes by its entrance—and occupies a new three story building, which cost thousands of dollars to build and fill—Among the hundreds of attractions within will be found a large and magnificent collection of Birds and the LARGEST COLLECTION OF BIRDS EGGS in a Public Museum in the State.

EXCHANGE EXTRAORDINARY! THIS OFFER EXPIRES SEPT. 15th.

We want at once the following first-class eggs, either in singles or sets, in exchange at Standard Catalogue rates, or if in sets, we will allow 10 per cent above these prices, in exchange for the articles mentioned below. Eggs taken in large or small quantities. No exchange amounting to less than \$1.00 can be "bothered with" unless 10cts. additional is enclosed for return postage and packing. If you have any of the rarer species to offer, send lists. Species wanted, A. O. U. No's 1, 3, 4, 7, 12, 16, 27, 29, 40, 49, 53, 58, 59, 63, 64, 65, 67, 69, 70, 71, 72, 74, 77, 80, 106; any Cormorants, Ducks or Geese, 184, 186; any Herons, 206, 208, 211, 212, 214, 219, 224, 225, 228, 230, 261, 263, 278, 280 289; any rare Quail or Grouse, 310, 315, 320, any Hawks or Owls, 387, 388, 394, 416, 417, any Hummers, 457, 458, 461, 466a, 467, 476, 484, 485, 486, 490, 494, 497, 505, 513, 538, 539, 542a, 546, 549, 550, 558, 587, 588a, 588b, 597, 598, 599, 601, 604, 608, 619, 631, 633, 681, 687, 702, 710, 715, 717a, 721, 721a, 721b, 724, 725, 727, 735, 743, 743a, 756, 759b, 767; Alligator and Snake. We will accept any species not mentioned above at one-half rates. The prices given in the Standard Catalogue *must* be used as a basis. All eggs must be strictly *first class* in every particular, and if not in such condition we will take out eggs to the amount of five times the actual cost of return postage to pay for same and trouble, and return the balance to you.

In return for the above we will give any of the following articles, specimens or supplies at the prices quoted.

Nickeled Blowpipe	\$.25	Fragment Indian Pottery, Fla	25
Imperfect Blowpipe	10	Alligator Tooth	25
No. 1, 8-100 Egg Drill	10	100 varieties Foreign Stamps	30
" 2-12-100 "	15	Sea Horse	50
" 3-15-100 "	17	Fossil Polyp Coral	25
" 4-18-100 "	29	Fossil Sea Urchin	25
" 5-21-100 "	25	Skate Egg	15
Nickel Plated Embryo Hook 4½ in. long	30	Shark Egg	20
GLASS EYES.—No. 10 Flint per prs	.08	Hammerhead Shark Egg	25
" 14 "	15	Barnacle, single	15
" 22 "	35	Starfish, Atlantic	25
" 26 "	50	Fossil Fish Eggs, one dozen	25
" 17 Brown "	25	Sand Dollar	10
100 Data Blanks, Assorted	35	Saw Fish Saw	75
12 New Checking Lists	35	Horned Toad, stuffed	75
Standard Catalogue of N. A. Birds Eggs	50	Small Porcupine Fish, a great curio	3.00
Handbook on Insect Collecting	15	<i>Echinoaster esenbeckii</i> , a rare black Starfish	75
Back No's of the Oölogist at single copy		<i>Holaster kubinii</i> , The South American Sun Dial or Many-armed Starfish	1.00
price as quoted on page 189, June issue,		<i>Astrella ochracea</i> , an unique Starfish	75
20 back numbers of Oölogist, our selection	75	<i>Nidorella armata</i> , a desirable Panama	
Oölogist (no premium) to Jan., 1891	50	Cushion Starfish	1.00
Oölogist, with premium, for one year	1.00	<i>Astrophyton Agassizii</i> , the rare Thousand-armed Basket-fish	2.00
Card good for 35-word "Want, Exchange or For Sale" notice in the Oölogist	1.00	<i>Lugunum bonarii</i> , a Phil. echinoderm	50
Davie's "Naturalists' Manual," 125 pages of valuable illustrated information	75	<i>Strongylocentrotus fruticulosus</i> , the Mammoth Pacific Urchin	1.50
World's Fair Almanac	35	<i>Fungia elegans</i> , perfect specimens of the Zanzibar Mushroom Coral	1.00
Beetle Nut, New Zealand	45	Scorpion nicely mounted and boxed	1.00
Red Sea Bean	65	Egg of Nurse Shark, a new and rare curio, offered collectors for the first time.	1.00
Gray Sea Bean	65		
Scaphites Nodosus extra fine	1.00		
Polished Agate	35		

BIRDS EGGS.

Can furnish species followed by * in sets with data if desired.

St. Domingo Grebe	\$.60
Sooty Tern*	35
Noddy*	60
Bridled Tern*	1.75
Audubon's Shearwater*	2.25
Scooter	2.00
Wood Ibis*	2.00
Ptarmigan	1.00
Chachalaca*	1.00

White crowned Pigeon*	1.50	Gray tailed Cardinal	1.50
White winged Dove*	50	Texan Cardinal*	50
Mex. Ground Dove	50	Sharpe's Seed-eater*	1.25
Tex Screech Owl*	75	Sennett's Thrasher*	20
Burrowing Owl	20	Curly-billed Thrasher*	20
Southern Hairy Wood-pecker	1.00	Carolina Wren	15
Mex. Crested Flycatcher	50	Bewick's Wren	30
Florida Blue Jay	50	Brown headed Nuthatch	35
Dwarf Cowbird	15	Tufted Titmouse	10
Red-eyed Cowbird	50	Dipper, Ouzel	1.00
Bullock's Oriole	12	Song Thrush*	10
House Finch*	.08	European Blackbird*	10
American Goldfinch*	.08	Pied Flycatcher*	20
Texas Sparrow*	60	Cat-tit Hunting*	30
		Moorhen*	20

This exchange offer holds good until Sept. 15th only, at which date, should we see fit to extend or make a similar one, many of the more desirable eggs, curios, etc., will *positively* be withdrawn. Address, F. H. LATTIN & CO., Albion, N. Y.

\$300.00 WORTH OF PRIZES

Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
THE OÖLOGIST.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7.50
Ridgway's "Manual of North American Birds".....	7.50
Chamberlain's "Nuttal's Ornithology" (2 vols.).....	8.00
Goss's "Birds of Kansas".....	7.50
Wilson's (and Bonaparte's) "American Ornithology".....	7.50
Maynard's "Birds of Eastern North America" (text complete). .	15.00
Washington Irving's Works, 10 vols.....	7.50
Wm. M. Thackeray's Works, 10 vols.....	10.00
Chas. Dickens' Works, 15 vols....	11.25
Jenk's "Comprehensive Commentary of the Holy Bible." 5 large 900 paged Volumes..	25.00
Sir Walter Scott's Works, 12 vols	12.00
\$10 worth of Phonographic Books and Publications.....	10.00
An 8-qt. Jack Frost Ice Cream Freezer	6.50
A Due-Bill good for \$31.50 towards a new \$46.50 Marlin Repeating Rifle.....	31.50
A Due-Bill good for \$33.00 towards a new \$45.00 American Union (same as New Home) Sewing Machine.....	33.00
A Due-Bill good for \$12.00 towards a new \$20 double case Odell Type writer.....	12.00
2nd Prize each month will be a part of "Maynard's Birds of Eastern North America," each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50.	
3d Prize—Langille's "Our Birds in Their Haunts", \$3.00	
4th Prize—Brewer's "North American Oölogy" unbound, no plates, original price about \$3.00.	
5th Prize—Baird's Review of American Birds" originally sold at \$2.00.	

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded the OÖLOGIST for 1893 bound in cloth and gilt.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the OÖLOGIST.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than the *first of next* month. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talk about Business."

3d A Combination Microscope.

4th An Agate Watch Charm.

5th A Pocket Knife.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 cts.).

All Judges' prizes are sent by mail prepaid.

Address your decision to

FRANK H. LATTIN,
Albion, N. Y.

VOL. X.

ALBION, N. Y., SEP. 1, 1893.

11

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges," "For Sales," inserted in this department for 50¢ per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50¢. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.
"Dealers" can use these columns at *Practical Advertising Rates only*.

"DEALERS" can use these columns at *Regular Advertising rates only*.
Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *out*, and according to conditions stated therein.

WANTED.—A pair of Ruddy Ducks, must be first-class skins, good exchange in fine skins or eggs. G. F. DIPPLE, 321 George St., Toronto, Can.

TO EXCHANGE.—The following first-class singles for same, or Davie's Key, A. O. U. No's 391, 423, 428, 452, 456, 507, 624, 721, 756—13 set.—**N. G. VAN DEWATER**, Gretna, Dutches Co., N.Y.

FOR EXCHANGE.--For best offer of stamps
the following first-class singles, A. O. U., No's.
501, 506, 152, 174b, 333, 611, 221, 475. M. V. STEW-
ART, Saxon, Henry Co., Illinois.

NOTICE.—I have a \$500 Pearl telescope as good as new. Will exchange for 1000 bass bird skins, books on Natural History and Taxidermy or will sell cheap. E. W. MAYER, 156 Mulberry St., Buffalo, N. Y.

TO EXCHANGE. -Collection over forty sets mostly rare ones for Shot gun. Small rifle. Revolver. Musical instruments. Through me Clog or anything of value. Will sell for cash half catalogue price. J. W. SHAFER, Box 23, Clarion, Iowa.

FOR EXCHANGE OR CASH—One of first class pair of climbers (strapped for climbing) \$100.00 and a half or for best exchange \$100.00 CALIF.
WELL CLEVELAND, Short Hills, N.J.

BARGAINS. 50 varieties Stamps very
only \$15. 25 varieties \$6.00
Would like to correspond with collectors of
shells, coins, stamps, reliques, &c.
CHARLES L. GOWEY, DePere, Wis.

WANTED—Three fine skins of Black-headed Gulls and 6 skins of White winged Gulls. For above we will give the very best price for anything we have for sale. W. H. LATTEIN & CO., Almon, N.C.

WANTED. Star Tobacco and large lots. Can offer you in exchange
Old Coins, Guns, Revolvers. Write
any kind taking fees at a
grade. Write me what you want.
DAVIS, North Granville, Wash.

FINE SETS of Eggs and Skins given in exchange for Star tobacco tin tags. HENRY DAVIS, North Granville, N.Y.

FOR SALE. 1000 Volumes of Standard Medical and other Scientific works. Anatomical preparations. Surgical instruments. High grade Banjo, Violin, etc. Will be sold at a bargain. Will make good exchange for a good type writer or photographic camera. Address, SECRETARY SOUTHWESTERN PHARMACEUTICAL CO., 115 South St., Holyoke, Mass.

EXCHANGE. Having recently moved here from Wisconsin would like to hear from collectors in vicinity of Minneapolis with a view to exchanging. J. D. CERRIE (ba West Lake St. Minneapolis, Minn.)

CALIF. MURRES EGGS.—I have a few sets left which I will sell pre-piped at 10¢ each or a hand-sealed series of 10 for \$1.00. Will exchange a few for *quail eggs*. Goods to exchange for eggs in sets. C. GARLOW, Box 135, Santa Clara, Cal.

EVERY person seems to have a set of eggs with which I will be returning, and twice they ride in from stamping grounds 20 to 25 miles away. First one sends me a worth of specimens. W. A. JOHNSTON & W. BROOKS, who are now in Boston.

FOR SALE—A good lot of the Carolina
Birds-Eye-Sort of Sassafras wood prior to
PHOS.—SMITHFIELD, VA.—\$100.00 per M.

WANTED.—Star tobacco tin tags in lots of 10, 20, 30, 40, or 50. Will give in exchange eggs in sets, taking tags at 3c. each. HENRY DAVIS, North Granville, N. Y.

WANTED.—Davie's Nests and Eggs (cloth), latest edition. Will give fine sets in exchange. Sets with data to exchange for same. Also some fine singles, as Buzzard, Hawks, Gulls, etc., to exchange for books, eggs, etc. JAMES M. ODELL, JR., Austin, Texas.

WANTED.—Singles of any of following A. O. U. No's 3, 4, 5, 12, 20, 31a, 38, 42, 47, 47, 63, 72, 78, 101, 133, 154, 183, 184, 185, 186, 206, 207, 210, 213, 220, 228, 243, 249, 258, 260, 275, 285, 300a, 300e, 308a, 308b, 309, 327, 332, 342, 349, 353, 355, 390a, 412a, 415, 416, 630a, 534, 550, 563a, 590, 623, 637, 501, 71ea. For any of above we will allow even Standard Catalogue rates for other eggs, or at $\frac{1}{2}$ rates for Supplies, adv. space, etc., etc. Send list first. F. H. LATTIN & CO., Albion, N. Y.

TO EXCHANGE.—Fine eggs in sets and singles to exchange for same. Strictly first-class and first-class wanted. JULIUS WEIEDLER, Red Wing, Minn.

WANTED.—Shot gun except single muzzle loader, Rifle breech loader except cheap grade Roberts, Revolver best grades, Safety Bicycle, Field Glass, Carpenter tools. Will give extra good exchange in Eggs, Watches, Books, Papers, V nickles, C. BYRON VANDERCOOK, Odin, Ills. 2AS

EGGS.

From the *Orient* and *Assem* (Malahha) correctly named, at moderate price. HERMANN ROLLE, Esndener St., 4, Berlin, N. W. Germany.

I HAVE first-class singles and novels to exchange for sets or singles. C. J. TIFFANY, Box 661, Newark, N. Y.

FINE SETS with data to exchange for Northern and Western sets. Wanted sets of Hawks, Hummers, etc. Will give good exchange in sets for sets of Black and Turkey Vultures, etc. All answered. JAS. ODELL, JR., Austin, Texas.

WANTED.—Star tobacco tin tags in lots of from 100 to 5000. For every 100 Star tags sent me now and Sept. 15th I will give any one of the following sets with full data: Anna's Hummer n-2, Costa's Hummer n-2, Black-chinned Hummer n-2, or will accept tags, allowing you 3c. each in exchange for eggs. For 10-9 tags, a fine skin of Ivory-billed Woodpecker put up in first-class condition. For 200 tags one fine gold filled watch case guaranteed to wear 15 years, with Am. Waltham or Elgin movements, value \$25. For 3000, your own selection of sets to the amount of \$90 from a large list of rare eggs. For 50-90 any of the following: One gold watch case, cash value \$50. One Remington double barrel breech loading shot gun with full set of reloading tools, and 200 loaded shells, cash value \$50. Owls, Gulls, Ducks, etc., etc., or accepting tags at rate as stated before. You can forward me tags in small or large lots. Match box is a good thing to send them in. Any other information cheerfully furnished. HENRY DAVIS, North Granville, N. Y.



21 Sea Shells in neat cabinet, named (scientific) and illustrated catalogue of Nat. Hist. specimens post paid, 30c. C.F. CARR,

New London, Wis.

Our Chicago Store, 3,571 Cottage Grove Ave.

Our Store at above address will be open until May 1st, 1894. We carry in same, a full line of *everything* which we have at our Albion headquarters.

Parties will save several days delay by addressing all orders and communications to us here, as both Mr. Lattin and Mr. Webb will be here until close of World's Fair.

The store is easily reached by Ill. Central Suburban trains, getting off at Douglas Station, 36th St., or by Cottage Grove Ave. cars, stopping at 36th.

The publishers of the Oölogist will be glad to meet their old friends and patrons, either at our main exhibit in the south east corner Gallery of the Anthropological Building, or in the Florida State Building where we have an attractive exhibit. The egg collection is at the former location.

In writing please be *sure* to give correct address.

F. H. LATTIN & CO.

Niagara Falls.

Hundreds of the Readers of the Oölogist will visit them during the World's Fair year and they should make it a point to visit

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Shells, Corals and Curios.

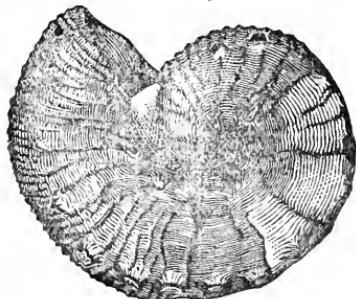
We wish to call the attention of our readers particularly to our large stock of above.

We are doubtless handling more shells at the present time than any other House in Central U. S. We are wholesaling to a large number of dealers on the World's Fair Grounds and are prepared to quote figures on a line of Shells and Corals that will stand any competition.

If you want to start a stand at some Fair or State Exposition, and make more money in one week than you have made in all summer, write for prices, or if you have our wholesale list recently sent you order from that. We are bound to contest the trade in this line, and a trial order will convince you of the quality of goods we are sending out.

F. H. Lattin & Co., Albion, N. Y.

**Fossils, Agates, Shells, Corals
and Curiosities. Cretaceous
Fossils of Eastern Monta-
na a Specialty.**



SCAPHITES NODUSUS, M. and H.

Aporrhais biangulata	15
Actaeon attenuata	15
Anisomylon pectiniformis	30
Baculites ovatus	10 to \$1.00
Callista Deweyi	15 to .25
Dentalium gracile	.15
Haninea minor	.15
Volsella Meeki	.15
Venrella subtumida	.15
Inoceramus convexus	.20 to .75
" Crispil	.15 to .75
Lunaria concinna	.15
Lucina subundata	.15
Margarita Nebrascensis	.15
Nicula cancellata	.15
Scaphites nodusus	.10 to \$2.00
Martesia cuneata	.15
Turnus Stimpsoni	.15
Fossil wood, containing Martesia, or Turnus	.25 to .75
Rock containing a variety of small fossils	.25 to .50
Tregoncarpus nuts (fossil size of Hickory nut)	.20 to .25
Fossil leaves	.15 to .75
Agates, rough	.10 to .50
" polished	.25 to \$2.00
California Onyx, polished	.40 to \$1.75
Petoskey Agates	.25 to .75
Fossil terns	.15 to .75
Petrified wood	.10 to .50
Agatized wood	.10 to .50
Poreclathite	.10 to .25
Honey-comb lava	.10 to .25
Sponge lava, will float in water	.15 to .50
Lava has been melted, and run like molasses	.15 to .50
candy	.15 to .50
Antelope horns, on upper part of skull, per pair	\$1.50 to \$2.00
Buffalo horns, per pair	.50 to \$1.50
Rattles from Rattlesnake	.10 to .25
Corals from Bahamas, Florida and Singapore	.25 to \$2.00
Small mixed shells from West Indies, per pint	.50
Large Assortment of showy American and Foreign Shells	.10 to \$5.00 each

10 per cent discount on cash orders of \$10.00 or more.

Send for price lists.

Homer Squyer,

Minerva,

Montana.

Choice Sets of Eggs.

In order to lower our stock as much as possible during the next thirty days, we will allow the following discounts.

15 per cent. on orders of \$2 or over.
20 " " " \$3 " "
25 " " " \$5 " "
30 " " " \$10 " "

Orders of \$50 and over **SPECIAL PRICES.**

The following are strictly first-class with full data. Singles can be furnished of any listed. Now is the time to add any of these species that may be lacking in your collection, as our stock may be exhausted within two weeks.

	No. eggs in set. Pereg- gall
Pied-billed Grebe	6. 7. 8. \$ 10
Puffin	1 20
Murre	1 20
Calif. Murre	1 20
Parasitic Jaeger	2 50
Iceland Gull	2 100
Kittiwake	2 40
Laughing Gull	2 20
Sooty Tern	1 25
Noddy Tern	1 50
Bridled Tern	1 100
Fulmar	1 75
Gannet	1 35
Minx Shearwater	1 75
Andubon's Shearwater	1 100
Leaches Petrel	1 20
Fork-tail Petrel, rare	1 200
Booby Gannet	2 150
Yellow-bill Tropic Bird	1 200
Brown Pelican	2 20
Blue-wing Teal	5-16 20
White-face Glossy Ibis	3-4 100
Wood Ibis	4 100
Reddish Egret	4 30
Louisiana Heron	5 15
Little Blue Heron	5 12
Green Heron	5 10
Black-crown N. Heron	4 12
Corn Crake	7-8 20
Black-necked Stilt	4 50
European Snipe	4 25
Wilson's Snipe	4 100
Golden Plover	4 40
Lapwing	4 15
Amer. Coot	6-10 08
Green Sandpiper	4 200
Sooty Grouse	6 85
Chachalaca	3 60
White crown Pigeon	2 75
Black Vulture	2 75
Turkey Vulture	2 75
Cooper's Hawk	4 30
Gray Sea Eagle	3 250
Kestrel	5 20
And. Caracara	2-3 100
Nighthawk	2 40
Merrills Paraque	2 250
Ela. Blue Jay	4 30
Western Bobolink	4-5 35
Least Flycatcher	3-4 12
Great-tail Grackle	4 15
Sage Thrasher	1-5 50

F. H. LATTIN & CO.,
Albion, N. Y.

PRINTING Of all kinds for Naturalists a specialty. Note and letter heads, envelopes, circulars, illustrated catalogues for natural history dealers. Have hundreds of engravings of natural history specimens. Write for estimates. 100 envelopes printed, 5¢, noteheads same price, postpaid. **C. F. CARR**, Job Printer, New London, Wis.

THE OÖLOGIST.

VOL. X.

ALBION, N. Y., SEP., 1893.

NO. 9

SCENES FROM THE LIFE OF ALEXANDER WILSON.

The Progress of His Undertaking.

G. VROOMAN SMITH.

VI.

Wilson's first extended pilgrimage was undertaken in the month of October, 1804, to Niagara country. He seems to have regarded this journey as a trial of strength, for the hardship which he was afterwards to undergo. On his return he wrote to Mr. Bartram that though he had travelled over twelve hundred miles on foot, at a late season of the year, through trackless forests and deep snows; crossed dangerous rivers and wild mountains; yet he was so far from being satisfied with what he had accomplished, or discouraged by what he had encountered, that he feels more earnest than ever to enter upon some new and more extensive expedition. He wished to visit scenes and subjects entirely new and as of yet unknown; and by so doing he might add something new to his stores of knowledge. He feels the utmost confidence in his own spirit and resolution; and having no family to claim his affections; no ties but those of friendship; with a constitution which hardens amidst fatigues, a disposition sociable and familiar, and equally at home by an Indian fire in the deep forests, as in the best of city society, he thinks he will become a traveller. But he about despaired when he reviewed his miserable deficiency in botany, mineralogy and drawing—acquirements absolutely necessary for a profitable expedition. He asks his venerable friend for instruction in botany and drawing; and with these he has no fear of anything. When

he wrote this letter the whole amount of his personal property was three quarters of a dollar; yet his determination to succeed overruled all these circumstances of greater importance. Still we must remember that it was not so much money needed to undertake an extended journey in those days as it was courage and perseverance.

The winter of 1804-5 was largely spent in teaching, drawing and preparing "The Foresters," an account of his remarkable journey in the form of a poem for publication. While on his way home from Niagara he passed through the Mohawk country, and it was near the banks of that majestic river that he shot two birds which he took much pains to preserve, supposing them to be wholly new to naturalists, though one of them the Canadian Jay was known before. He took much pains in drawing these specimens, and presented them to Thomas Jefferson, then President of the United States who acknowledged them in a very cordial manner. There were few in this country at that time who possessed a more thorough knowledge of our native birds than did Mr. Jefferson; and it is worthy to remark that one of our common birds presented an impenetrable mystery to him, and he recommended Wilson to make a careful study of it and to see if he could determine its name. From the brief description Mr. Jefferson gave and what he had learned himself, Wilson was able to distinguish the Wood Thrush as the species to which he referred.

The winter of 1805 was one of unusual severity and the poor throughout the country suffered much with cold and hunger. Owing to this Wilson's school was at its lowest ebb, and he says that he was scarcely able to col-

lect sufficient tuition to pay his board, having no more than twenty-seven scholars. He threatened to give up the school if the authorities did not supply him with more funds and scholars. A meeting of the trustees was called, and rather than have him resign, two gentlemen offered to pay one hundred dollars a year themselves. Forty-six scholars were subscribed for and he remained in his humble vocation. Although such embarrassments as these arose, yet he was resolutely bent on accomplishing his great design and he occupied every leisure moment in studying birds and making drawings.

The trials and hardships of that memorable winter at last past, he hailed the appearance of Spring with joy and rising enthusiasm. With the return of Spring came his favorite companions—the birds; and he sacrificed every amusement except reading and fiddling for the accomplishment of his plans. He had now entered upon the profession of an ornithologist in earnest. As the first streak of dawn tinged the eastern horizon he shouldered his gun and sketching material and set out in pursuit of some new and strange bird just arriving from the South. Scarcely a month had elapsed before he had completed and sent to Mr. Bartram for inspection twenty-eight drawings of birds found in Pennsylvania, either as regular residents or stragglers. Two of these were entirely new to naturalists as they were unfigured either in Bartram's list or Edward's seven volumes.

He had heard that former naturalists had executed the plates illustrative of their works themselves, and he felt confident that he could do likewise. Thereupon he procured the necessary copper plates and at once attempted etching them. The next day he burst into Mr. Lawson's office saying that he had completed his first plate and must have a proof before he left there. The proof was taken but it fell far short of his ex-

pectations. After a few more trials of similar success he threw them aside in despair convinced that nothing short of the engraver would give proper effect to his illustrations. Mr. Bartram refused to engage with him jointly in his work. Thus baffled and discouraged he solemnly resolved to proceed alone in the publication even if it cost him his life. Using his own words he said that "I shall at least leave a small beacon to point out where I perished."

In the year 1806 Wilson learned that Thomas Jefferson, President of the United States contemplated equipping and sending out an expedition to explore the valley of the Mississippi. The Mississippi valley then known as the Louisiana Territory was a new region and Mr. Jefferson realized the importance of exploring that region before he made his famous purchase. Wilson had long indulged in the desire to visit this region; in fact he had not long before seriously contemplated descending the Ohio river in search of new specimens. A favorable opportunity was now afforded him and he lost no time in gaining the consent of Mr. Bartram, who was a close friend of Jefferson, to write him a letter of recommendation. This letter together with the one he wrote was enclosed in one cover and addressed to "His Excellency, Thomas Jefferson, President of the United States." In this letter he set forth the design of his new ornithology of the United States, and stated that although he had traversed the greater part of our northern and eastern states and had completed upwards of one hundred drawings, yet he was unacquainted with the beautiful tribes inhabiting the extensive country of the Ohio. He said he had engaged the assistance and companionship of Mr. Bartram in an expedition down the Ohio river from Pittsburgh to the Mississippi thence to New Orleans, and to continue researches by land in return to Phila-

adelphia; but after taking into more serious consideration the advanced age of Mr. Bartram and the weakness of his eye-sight and other inabilities to encounter the fatigues of such an extended journey, he had given up all hopes of accomplishing the enterprise; till he learned of the expedition the government contemplated dispatching to the Red River, the Arkansas and other tributaries of the Mississippi. He assured his Excellency that his services would be of advantage and at the same time would afford an opportunity of procuring subjects for the work which he had so much at heart. Being accustomed to the hardship of travel, without a family and an enthusiastic in the pursuit of Natural History he begs leave to offer himself for any of these expeditions.

For some unknown reason Wilson failed to receive a reply to his letter, nor did he receive an appointment to accompany the expedition. One of Wilson's biographers has chose to regard his not receiving a reply to his courteous application as "so little did Mr. Jefferson regard the pretensions of genius and the interests of science." We beg to differ with his biographer in this particular as Mr. Jefferson had ever manifested an earnest interest in Natural History. In fact he had prepared "Notes upon the Natural History of Virginia" and had furthermore pointed out to Wilson a species of bird of which he was unacquainted and of which he wished enlightenment. We may more reasonably suppose that Wilson's letter was miscarried than that it was intentionally neglected. What ever may have been the cause of his failure to receive a reply, Wilson was greatly mortified and disappointed and regarded it as having lost the golden opportunity of his life. Although Wilson did succeed a few years later in accomplishing a journey down the Ohio, yet the advantages to be gained by accompanying a governmental expedition were manifold and wanting in this latter journey.

The American and Least Bitterns in Henry County, Ills.

AMERICAN BITTERN.

This year I was very fortunate in procuring sets of eggs from this bird. Last year a thorough search did not reveal a single nest and they were almost unknown to the "boys" with whom I visited while hunting in the swamps.

These swamps cover about a township and are at times covered with water from a few inches to 3 feet deep. Most of my sets were taken in ponds around the margin or on the divide between this swamp and one south of it.

My first set was taken May 22nd and was of 5 eggs. Fresh.

The nest was the most elaborate of any I saw and was about 2 feet long by 18 inches across and 8 inches thick composed of dry rushes of last years growth laid on a bunch of broken down rushes over 3 feet of water, in a pond, perhaps an acre in extent. The rush used in nearly all the nests is a round rush, about the size of a lead pencil and 3 or 4 feet high, which is very common in the swamps.

The nest was nearly flat.

The eggs vary in color from a dead grass or straw to the green one often seen in grass dried in the shade, the first eggs laid being the most faded and nearly the color of the dead rushes of the nest. The eggs measure 2.02x1.44, 2.00x1.42, 2.03x1.41, 2.06x1.42, 2.01x1.44, average 2.02x1.42.

The bird was on the nest and another, the male perhaps, a few yards away.

The second set, of 6 eggs, was found in a pond of about 20 acres.

The nest was a platform of dry rushes, in a thick patch of green rushes, nearly flat, and only a few inches thick.

The eggs were nearly all fresh, one or two showing signs of incubation. They measure 2.00x1.46, 2.08x1.47, 2.00x1.46, 2.02x1.42, 2.01x1.46, average 2.03x1.45. In color they run from a yell w

ish drab to a greenish nearly like grass dried in the shade.

This pond was covered with a growth of rushes, flags and grass and was a great nesting place for Coots, Rails, Galinules, Bitterns, Black birds and I found my first Mallards nest in it. I had been very well pleased with sets of 10 Coots, 13 of King Rail, etc., but when I got to the shore where my friend John, who was helping me was waiting he took my breath away with the statement that he had not done very well—only a set of 6 Bittern and 1-16 King Rail besides a few sets of 8 Coots. The water in the pond varied from 6 inches to 2 feet.

My third set was in a small pond near the main swamp and had been found a few days before by "George" when it had only one egg in it.

The nest as usual was in a thick clump of rushes, nearly flat, and a very flimsy affair, perhaps 8 inches across by 12 long. The eggs being about 4 inches above the water.

The color of these eggs is very difficult to describe. They run from a dark cream to the color of dead grass.

The measurements are 2.05x1.48, 2.03 x1.50, 1.94x1.51, 2.07x1.48, average 2.02 x1.49. As will be seen the shortest egg so far is the broadest 1.94x1.51.

The 4th set was found on the edge of the swamp near where I had seen a pair the day before and thought from their actions they must have a nest close by. I had given it up when I heard "George" laughing and as he is a model small boy for egg hunting who rarely makes a noise I went to him at once and saw something well worth laughing at, a Bittern setting on her nest scolding just as a setting hen will, and with about the same "chuck." Her feathers were all standing out and with her head drawn back and bill open to its utmost extent she was a comical sight and one to be handled carefully.

I gave her the basket to bite while I

picked her up, but was disappointed to find only two eggs.

George put her under his arm and holding her head in his hand carried her to the house and put her in a barrel, where we were rewarded by another egg next day. As she did not lay again I supposed the set must have been completed at 1-3. This was the most flimsy nest of all; placed in a very thin patch of rushes and not over two inches thick and only wide enough to hold the eggs. The water here was only about 3 inches deep. These eggs were taken on the 22nd of May.

My next visit to the swamp was made on June 14th, but I found it rather late for the American Bittern, some sets found being ready to hatch. I got two very good sets, of 4 each, one from the large pond spoken of before. The first set was discovered by the scolding of the bird on the nest as in the case mentioned above. The nest was well hidden in a dense growth of rushes, at this time 3 or 4 feet above the water and the bird remained on it until I had called my companion and prepared to take her when she flew a short distance. The nest was a shallow platform of dead rushes placed in a clump of green rushes.

Incubation had begun and as usual varied several days. They measure 1.90x1.47, 1.91x1.50, 1.96x1.42, 1.91x1.42. In color they are what might be called a very dark cream, or cream with dust mixed through it.

Another set of 4 was taken in the pond where the set of 1-5 was found. I did not take this set myself but the boys informed me the nest was a shallow platform of reeds placed on the broken stems of a clump of reeds, a few inches above water level and over several feet of water.

They measure 2.04x1.48, 1.90x1.49, 2.04x1.47, 1.94x1.45. Incubation begun.

They are of the greenish color described before.

Several other sets were taken, among them two sets of 5, and a number of nests with incomplete sets or badly incubated eggs were left.

The average of the 23 egg measured is 1.97×1.45 . They run from 2.08×1.90 long and from 1.41×1.51 broad. The color is hard to describe and I could not find one who would venture to call it any name. One variety has the appearance of having faded to the color of the rushes on which they are laid but even fresh eggs have this color, while others, even when well incubated, have a greenish tinge. The nests were always over water and composed of dry rushes and the round reed spoken of before. They have much the appearance of a large and very thick doves nest and will average $10 \times 15 \times 4$.

A few rushes are broken to the tip of the water and on these the nest is laid.

LEAST BITTERN.

Last year the Least Bittern was to be found in every clump of rushes and I was told its nests were as common as those of the Redwing, and from the birds I saw I do not doubt it, although I was not able to visit the place during the breeding season.

This year the birds were not at all common at any time, and I did not get the number of sets I desired by any means.

Full sets can rarely be obtained by the 10th of June and the nesting season is at its height about the 25th.

The nest is a platform of last years reeds, not unlike a doves nest except that it is larger and deeper.

It is placed in a clump of rushes on the tops that have been bent by the storms or by the birds, and always over water and usually from 10 to 18 inches above it, the deeper the water the better, which may account for their abundance last year when the marsh was deeply covered all the spring.

The number of eggs in a set is from 3 to 5 with 4 as the average.

In color they are a greenish or bluish white but the color is very nearly white and I judge specimens after a long exposure to the light will be found to be faded to that color.

A set of 5 measure, $1.24 \times .93$, $1.19 \times .95$, $1.20 \times .96$, $1.22 \times .93$, $1.20 \times .94$. Incubation fresh. A set of 4, $1.19 \times .94$, $1.27 \times .92$, $1.25 \times .91$, $1.22 \times .95$. Incubation begun.

The eggs except the tinge of color in them could not be told from large doves eggs.

The sets were all taken on the 14th of June.

One thing I saw surprised me and that was the fact that of all the birds I saw about the nests only one was a female, who left a nest containing three fresh eggs. From this I concluded the male must do the incubating, at least during the day.

At this time, June 14th, incubation had begun in a few sets, but was not advanced over 3 or 4 days in any.

The Least Bittern unlike the American Bittern can be found all over the marsh, one nest I found being out about a mile and near a place where hundreds of Black-crowned Night Herons were nesting.

It is one of the most interesting birds found in the marshes, and seems to be common all over the state.

I have never heard one make any sound and men who have lived in the swamps all their lives say it makes no call whatever.

DR. A. C. MURCHISON,
Kewanee, Ills.

Cruising and Science

BY "TOMMY HAWK"

Only those who have a personal knowledge of the pleasures of cruising can fully comprehend its true enchantment. Cruising is a delight because it brings one into that glorious society

called "solitude" and stages before the admiring eye the grandest of scenes enacted in the great theatre of the natural world; it educates the desirable faculty of careful observation and supplies it with an inexhaustible amount of material for consideration; it fosters a desire for knowledge, and engenders health.

Referring to some note-books filled with experiences of days of yore, when the cares and responsibilities of life were but vaguely understood and the free-hearted school-boy planned and schemed for summer vacations long before the term approached its close—referring to-day to these mementoes of the past, I find therein accounts of many a cruise on river, lake and ocean which as I read bring me again to old familiar haunts, once more I hear the merry bark of my good old setter as, with gun in hand, we leave the old homestead at sunrise to surprise the Quail in their haunts; once more I feel myself on the New York Harbor in the white-sailed cat-boat, as with tiller in hand we cruise along its well-known shores. Again the tent is spread on the shores of many a lake, or with no better shelter than the bottom of my inverted canoe, the night passed with that sweet, refreshing slumber so kindly granted to healthful youth. But the cat-boat changed hands before I left college; the canoe, built in my own work-shop, by means of which some of the most delightful cruises on lakes and rivers were made and with which I have covered more miles and gained more enjoyments than I have yet been able to do with the beautiful "Rushton" now in my possession, was abandoned. The gun—companion of many a cruise—with which wing-shots were made that I can now hardly rival, certainly not excel, with my improved "Greener," was in due time discarded for its more modern successor. My dog—faithful friend—who was frequently my sole living companion for many days and

nights—barring, of course, the broad realm of vitalized nature by which we were environed—remained with me until his death which occurred some years since. Those days have indeed passed to return no more, but the incidents with which they were fraught are still fresh and bright on memory's page. The love of cruising, inculcated by hearty indulgence in the mind of the boy, still exists in the life of the man. Nature is still as dear as then and she now speaks in even plainer language—sweeter because better understood.

But a truce to these reflections. The object of this communication is to give the readers of the OÖLOGIST some practical hints on cruising as applied to research in Oology and Ornithology, and to assist in bringing its peculiar pleasures and benefits within their possession.

First of all, in order to "cruise" a boat is necessary. If the journey is to be upon the ocean or its immediate tributaries, a well equipped sailing craft is quite essential; if upon a large lake, a commodious craft upon which a sail may be rigged, is often desirable; but for rivers and lakes of moderate size a portable canoe will be found advantageous. As space would fail us to consider in detail each variety of craft just mentioned we will devote ourselves to a consideration of the latter class—the canoe—and reserve the two former for separate description at a late date.

The advantages of a light canoe for navigating small streams, for exploring the arms and tributaries of lakes and rivers, etc., while studying natural phenomena are plainly obvious. For these purposes an expensive, heavy boat is by no means the most desirable; but, on the contrary, a light, portable craft such as may be constructed at home with slight expense is often as good as any. Such boats, however, are hardly suited to hunting excursions and for carrying heavy outfits.

THE OÖLOGIST.

Some years ago the writer decided to cruise a considerable distance down the Connecticut River to make certain geological observation and to observe natural phenomena in general. The season selected was rather late for observations in Oölogy, but numerous species of birds were studied and elaborate notes taken. A few valuable specimens were also secured. For this cruise a boat capable of carrying one person and a small outfit, and also light enough to be itself carried on the shoulders for short distances, was necessary. Such a craft was accordingly planned and soon constructed; and since it proved to be so well suited to the purpose and in every way desirable and reliable, I shall briefly describe how it was built. It very much resembled in appearance an ordinary canvas canoe, only it was somewhat wider and was provided with rowlocks and light oars instead of the usual double-bladed paddle. It was desirable to have a boat that could be propelled by oars as well as paddle for this cruise, but if any of my readers desire to build a canoe for paddling alone, it might be well to make it somewhat shorter in the beam than the one about to be described; never the less, as a rule, the broader the boat the steadier she will be in the water.

My boat was twelve feet long. The first thing made was the frame-work over which the canvas was stretched. A cedar board ten inches wide, an inch thick and eleven feet six inches in length, was taken as the bottom board or keelson, and was marked off by two transverse lines into three equal lengths. Each outer third of the board was then cut tapering toward its respective end until it measured but one and a half inch at the extremities, and the under edges were beveled off along its entire length. Two cross-boards, or moulds, were next sawed from a one-inch pine plank. These were thirty six inches

wide and thirteen inches high, and were cut away in the center to avoid useless weight. They were rounded at their two lower corners and notches one inch and a half deep were sawed in the two upper corners of each to receive the gunwales. These moulds were then fastened cross wise to the keelson, on the transverse lines already marked off, with long stout screws passed from below upward—and when so placed divided the keelson in three equal parts. The stem and stern pieces were then added. For these I secured two strips of green elm eighteen inches long and an inch and a half square. One end of each was cut off obliquely so as to taper for a distance of about two and a half inches, and by this end—the oblique surface resting upon the keelson and the square end pointing straight out—one strip was firmly screwed to each extremity of the bottom board. Both were then bent over, with their concave surfaces toward the middle of the board, until they formed curved end pieces or "ent-waters," and were secured in this position by means of wires stretched from their free extremities to nails driven into the bottom-board (keelson) near the moulds. Elm was used for this purpose because tough and not likely to break in bending and the green wood was taken because on drying it would retain, to a considerable extent, the shape into which it had been bent. The gunwales were next added. They consisted of light strips of ash a little more than twelve feet in length, an inch and a half wide and half an inch thick. They were fastened by means of long nails to the moulds and firmly secured to the end pieces with slim bolts—the end pieces being notched to make them flush. Everything was now ready for the ribs, but before these were put on two strips of wood similar to the gunwales were stretched from stem to stern and made a pass along the lower

curvatures of the mould, to which they were lightly tacked; they were also tied to the end pieces at about their middle. These were temporary guides to putting in the ribs and were removed as soon as these latter were put in. Without these guides it would have been difficult to give uniform shape to the boat. For ribs I used rattan switches about three-eighths of an inch thick. These were soaked in water to make them pliable and then fastened to the keelson with copper nails, an awl being used to mark holes for them in the rattan. They were then bent over on each side until they touch the guiding strips, then fashioned up to the gunwales, cut off even with the tops of these; notched to receive them and ultimately fastened to them with copper tacks. Between the cross-boards the ribs were placed at intervals of about three inches while toward the ends of the frame they were put about six inches apart.

The frame-work being now complete the canvas was next put on. This had been previously oiled and was now laid over the frame and fastened to the center of the keelson throughout its entire length with copper tacks. To accomplish this the frame was, of course, turned upside down. The canvas was lightly tacked to the gunwales, then cut to fit the end pieces and then tacked firmly to them by lapping the edges over each other and securing them by a double row of copper tacks. Lastly, the canvas was stretched tightly over the gunwales and securely tacked to their inside surface. The outside of the canvas then received a coat of white paint and so soon as this was dry a small, straight-grained oak keel, one inch square and long enough to reach from stem-post to stern-post was screwed to the center of the keelson directly over the row of tacks driven into this bottom-board to hold the canvas. The keel was cut so as to taper to an edge at either end and

thus made flush with the keelson instead of terminating abruptly. After the first coat of paint was dry another containing an almost equal proportion of varnish was put on, and afterwards, a narrow stripe of light blue was put along the gunwales.

The boat thus constructed proved to be all I had desired. Upon trial I found her to be perfectly water-tight, light, steady, and easily handled with paddle or oars—I had build her wide and deep, however, with the intention of using the latter.

It now remained to supply my craft with seat, rowlocks and oars. The seat—which was movable—consisted of a square frame about eight inches high, surmounted by a cushion and made to rest on the floor of the boat. The gunwales alone were not firm enough to support rowlocks, and hence these were secured to a strip of iron which was first screwed to the keelson, then bent up each side, bolted to the gunwales and made to project somewhat over them. The locks themselves, consisted of nothing more than short upright pins of three-fourths inch iron. A large washer, well padded with leather, was slipped over the rods or pins and made to encircle their bases. These were for the oars to rest upon when in the locks, so as to facilitate their easy motion.

The oars were light and short, and provided with a longitudinal slit to receive the rowlocks. A slit just wide enough to fit the locks easily, and just long enough to permit of sufficient "dip" was made, care being taken not to cut away more wood than necessary and thus weaken the oars.

My boat was then finished and in a couple of days I started on the cruise. I might have put a deck of canvas fore and aft on the boat to prevent her shipping water in heavy seas, but found this unnecessary on account of her ample depth.

Space will not permit me to relate even one of the many pleasurable incidents of that fifty mile cruise down the Connecticut, nor to tell you of the pleasant hours subsequently spent on lakes and rivers with this craft, in pursuit of both knowledge and recreation. One word, however, about my outfit. I usually went alone. I carried a gun, hunting knife, ammunition, a rubber blanket, a few canned goods and other light provisions, fishing-tackle, sketch-books, taxidermist's instruments, pocket drinking cup, matches, soap and towels. It is well when taking a long trip to carry as little as possible trusting to the houses along your course for meals and lodging. Still, it's sometimes necessary to economize and always well to be prepared for an emergency. Again, boys who cannot swim must forego the pleasure of canoeing.

In a subsequent article we will consider the construction of another craft also adapted to the needs of students of natural science. In conclusion, if any of the readers of the OÖLOGIST desire to construct a boat similar to the one herein described, yet find this description insufficient or inadequate, the writer will give them such information as he is able if they will write a letter stating their wants and mail it to

"TOMMY HAWK,"

Care of Dr. E., 118 South St., Holyoke, Mass.

The Rose-breasted Grosbeak at Home.

The Rose-breasted Grosbeak is a not uncommon bird hereabouts during the summer; but, somehow or other, like certain other of our common birds it is true of him that, though you see him often himself, the place of his habitation is not so frequently met with. Hence it is that I have chosen to speak of his majesty "*at home!*"

But perhaps you don't know where he lives? Well, come with me and I

will show you his private residence. Perhaps you better put on your rubber boots before starting, as you are likely to need them.

Two miles south, turn to your right, then a mile west. Here the road skirts a piece of woods. Over the fence and you are in the "Peat Swamp," many acres in extent, and thickly wooded. Proceed straight south through the woods. The land keeps getting lower and the water more plentiful, and soon you come to an opening in the forest, where you find a vast swampy meadow entirely surrounded by woods. The meadow itself is nothing more than a swamp, there being water on every hand, and progress is only practicable along the higher elevations or by stepping from one tussock of grass to another.

All over this swampy meadow are bushes growing, which become thicker and more entangled as we approach the bordering woods.

Now look out. Here are numerous warblers and a fine place it is to study them. Yellow Warblers, Chestnut-Sided and the Maryland Yellow-throat breed here, and Wilson's Thrush in the woods near by; while in the bushes you will find an occasional Grosbeak's nest.

As you come upon this rural residence of *H. ludoviciana*, you are quite as likely to find the *man* of the house in as the *lady*, for he "spends his evenings at home," in short, does his share of the housework. You are quite as likely to find the male Grosbeak on the nest as the female, and how different in appearance, the two! The male in all the rich gorgeousness of his red, white and black, while the female is of a dull brown throughout. As you approach the nest, either bird will not leave until you almost touch the nest, when it slides out and away. If it be the male, he remains in the immediate vicinity, flitting from bush to bush and offering occasional remonstrance. If it be the fe-

male she flits through the bushes and away.

I have not visited the Peat Swamp since June, 1890, but at that time several pairs of these birds were breeding in close proximity to each other. All the nests I found were uniformly four feet from the ground in the forks of bushes, and lightly composed of weed-stalks, grasses and hemlock twigs, lined with finer hemlock twigs. However, it did not strike me that the nests were as lightly and loosely composed as the books would lead us to think the nests of this bird are.

The eggs are invariably four, and the time to go for complete sets in this locality, is June 5-8. (For a description of the eggs of the Rose-breasted Grosbeak, and how they vary among themselves, see an article by me in August, 1890 OÖLOGIST, on "Variation in eggs of *Habia ludoviciana*.)

So much for the Rose-breasted Grosbeak at home. He is modest, and gentle, and never has much to say, excepting before breakfast and after tea, when he may rise to some near-by tree and pour forth one of the richest sylvan melodies with which God has blessed the world. Oh, the depth and richness of those evening notes. He is a true poet, and what depth of soul must find expression in those touching chords which arise from these lonely swampy wildernesses, as the evening sun sets reluctantly in the west leaving rosy, blushing clouds behind, and twilight comes slowly on. Oh, sweet memories of summer evenings, gorgeous sunsets, approaching night, and sweet notes arising on the evening air from lonely forest dells, lull me to sleep in deepest reverie of God's goodness unto man.

NEIL F. POSSON.
Medina, N. Y.

The Nighthawk's Nest.

I know of no bird, nesting in this vicinity, that has, within the last few

years, so completely changed its nesting habits as the Nighthawk. It has almost entirely disappeared from its original home in the wilds of the country, and rears its young on the great roofs in the heart of the city, and here they are more than abundant.

The eggs are deposited upon the coarse gravel, without even the apology for a nest, which they once constructed, and, as they possess a remarkable resemblance to the pebbles about it is a difficult task to discover them.

The heat on these roofs—in the day time—is so excessive, that all search has to be conducted in the earley morning, and even then it is a *hot job*.

It has long been a debatable question in my mind, whether this heat does not often destroy the eggs and young, as I have several times taken eggs, either addled or containing dead young, from nests that I was certain were occupied.

FRED BAKER,
Stratford, Ont.

Leaving Nest Eggs.

It has been my experience that quite a number of birds may be induced to lay more than their complement of eggs by leaving one or more eggs in the nest. A few years ago, there was a Red-shafted Flicker made its nest in an old gate post near my home from which I removed ten eggs, from one to three at a time; the bird laying fifteen and eight being common number, the five left were hatched. From another nest of same last year I took twelve eggs, when they quit laying. From a nest of American Goldfinch I took seven eggs by leaving nest eggs. California Quail and Sooty Grouse will lay about double their number by leaving one or two in the nest. The eggs must be removed with a spoon or in some way that the nest will not be touched with the hand.

ELLIS F. HADLEY,
Dayton, Ore.

THE OÖLOGIST,

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and Items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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* * Articles, Items of interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

A Narrow Escape.

One beautiful morning in early April 1891, myself and a friend started on an oölogical excursion along the picturesque banks of the Tennessee river, for the purpose of obtaining specimen eggs of the "Turkey Buzzard," which birds we had been previously informed, nested in the various caves and fissures,

which abound in the verdure-clad, precipitous bluffs, above London, Tenn.

We started at 6 A. M. on April 13th. Procuring a skiff we quickly cut through the water to the opposite bank of the river, and having tied the boat, proceeded on foot across country about two miles, to the bluffs opposite Carnuchael's Island, "our Eldorado."

Arriving we immediately proceeded to business, and were encouraged by seeing several Buzzards majestically sailing up and down in our immediate neighborhood. After half an hour's diligent searching, just as I was swinging by a scant cedar round an angle to a projecting rock in front of me, I saw a great female come flapping out of a narrow fissure not ten feet away, and after a little difficult climbing, I reached the site, discovering a fine set of two eggs on the bare ground about 12 feet from the entrance.

In less than an hour we had secured another set equally fine in a small cave lower down, and had just finished blowing them, when a country lad appeared on the scene, telling us he knew of a "bluff" hawk's nest, near his home, half a mile further on; and volunteering to locate it for us. We packed up and proceeded being well satisfied with the Buzzards. On arriving, the nest was pointed out to us in an enormous pine of nearly five feet in diameter, and having no limbs for at least ninety feet, which caused us to set our wits working; but seeing a beautiful female Red tail leave the nest and join her mate far above, I cried "nil desperandum!" an idea had struck me. I saw that by falling a fine red oak which stood about 20 feet away, so that its top branches would catch in the lower ones of the pine, our object might be accomplished and the oracle read.

Despatching the boy for an ax we promptly set to work and in less than an hour the noble oak was bending towards the pine. A few more blows with

the ax, and crack! more than half the oak's top has passed the pine, when it stops, it has barely caught by a few of the top-most branches. From that moment I regarded the contents of that nest as mine. Quickly taking off shoes and other "impedimenta" in spite of friends entreaties, I am bounding up that faithful oak like a squirrel; and peeping into that large shallow mass of sticks and weeds, I called to my friends—three beauties!

There was also a freshly killed mole in the nest. I descended as quickly as my treasure would allow and noticed my friend drew a sigh of relief as I landed safely on "terra firma."

I had not finished blowing the eggs when a slight wind carried my oak tree to the ground with an alarming crash. I am less venturesome now.

WILLIAM WAKE.

The Sap-Sucker.

BY DR. MORRIS GIBBS.

There are many species of birds in America which have been dishonored with the name of Sap-sucker, and the name has been indiscriminately applied to all of our smaller woodpeckers. In Michigan there are nine species of woodpeckers. Of these, one, the American three-toed Woodpecker, is alone rare, and only found in our northern confines. The Arctic three-toed bird, is abundant in sections north of the forty-fourth parallel. These two little known representatives of our northern forests, never migrate to the south, while the other seven are more or less variable in this respect. The Downy and Hairy Woodpeckers are hardy examples of this interesting family, and are often to be found in our yards and groves during the winter months. We may frequently find the Red-bellied woodpecker in deep beech forests in January and February, while the Black or Pileated

Wood-pecker is not rare in the wilder sections. The Red-head, and Golden-wing, or as it is commonly known, the Flicker, are occasionally found in mild winters. However, all of them, excepting the first two, are more or less given to migrating in cold seasons.

The Yellow-belly, or true sap-sucker of the north, *sphyrapicus varius* is the only one to migrate regularly. It appears from the south in late March usually, and is a great loiterer on the way, often remaining in our southern counties till May is half over.

It is an excellent judge of the quality of the sap of the sugar maple—and no farmer in the country knows better when to tap the trees than does this strange lover of sweets. Soon after the snow disappears, as a rule, though often during a warm spell, and when the snow is still upon the ground, a peculiarly variegated bird may be seen upon our maples in the city, village or in the suburbs. It is dark on its upper parts, with lighter markings, giving it a striped appearance, while its head is ornamented with a red patch of a size to indicate age and sex, although immatures are sometimes without the red markings. If the under parts are seen, the yellow, from which it gets its name, will be observed, and with very mature specimens, a large blotch of red is to be found on the upper part of the throat.

This bird upon its appearance, immediately proceeds to bore little holes through the bark of the maples. The holes are from one-sixteenth to three-eighths of an inch in diameter, averaging about three-sixteenth in size. These punctures are rarely more than one-quarter of an inch in depth, are generally elliptical, and this shape is much more noticeable in the borings on the coniferous trees.

Many claim that these holes are dug to allow the bird to secure the insects. But this is a ridiculous notion, as it is well known that insects do not inhabit live bark or wood. Furthermore I have

examined hundreds of these perforations, and the neighboring areas for insects, and have never discovered a single one.

The Yellow-bellied Sap-sucker is very readily approached at this time, and one can easily get within a few yards without alarming the workman. If we get too near, while the borer is engaged low down on the trunk, he will scuttle to the opposite side of the tree, by a series of side jumps, still keeping the same upright position as regards the body. If forced to leave the tree, another is immediately visited and work renewed on a second series of holes.

There perforation are made at a height varing from three to sixty feet to my knowledge. I have frequently observe birds boring at a height of forty to fifty feet. This season I carefully noted the ways of a bird which had made a row of seventeen holes on the south side of a sugar maple a foot or so in diameter, and which stood within a yard of the sidewalk in the city. The holes were bored at a height of four feet, and the bird, in selecting the south side of the tree, was constantly exposed to observation. When a person was passing, the bird would side-hitch to the north side and return again after the disturber was gone.

These wounds on the sugar maple, of course produced a flow of sap, and the birds regaled themselves on the sweets. There are several other trees which produce sweet sap, and among these is the evergreen, which yields a small amount of very sticky, gummy balsamic liquid. The sap-suckers are very fond of this sap, and will spend more time around a big tree of this species than about the maples. The largest number of holes which I have counted in a small space, was on a large evergreen where there were over one hundred in an area of three by eight inches. These holes are generally arranged in rows, and are often quite symmetrical. In one case

that I examined there were forty-seven punctures in a space of two by three inches. The tree had been attacked year after year and the bark gave ample evidence of the severe devastation in many parts.

In attacking the sugar maple, the birds rarely make two rows near to each other on the trunk, but this is frequently done on the smaller as well as the larger limbs. The trunk is sometimes almost completely girdled with small holes from a quarter to a half inch apart.

If a bird, or pair them, for they are generally to be seen in pairs soon after arriving, are watched it will be seen that they will return to a tree again and again to sneak the sap which accumulates in the perforations. It takes but a second or so for the bird to introduce the point of its bill and suck all available sap—and then to the next hole. After all the perforations have been probed two or three times, the birds fly to the next tree. As a rule a pair of birds have from four to six trees which they visit in regular order the livelong day, but sometimes a single tree with holes at various heights, forms a steady feeding ground.

At times the Yellow-belly is seen circling about after the manner of the other woodpeckers and evidently in pursuit of insects, but in these searchings he is never known to make the chips fly as do nearly all of his relatives. In fact some writers claim that it is not in his nature, owing to a lack in the make-up of his tongue, to feed on insects as do the other members of the family.

The Sap sucker digs a hole for its five to seven crystal white eggs after the manner of its kind. The birds are rarely found nesting south of the forty-fourth parallel.

It would be an exceedingly interesting experiment to secure an adult bird and test its ability to live entirely on sweet sap.

The White-tailed Kite and Prairie Falcon in California.

WHITE-TAILED KITE.

There is perhaps, no more inspiring a sight to the true ornithologist who finds himself in the field on a bright spring day, than the dashing flight of some Hawk or Falcon in pursuit of its prey, or the wonderful evolutions it performs in mid-air. There is a degree of mystery attending the delicate poising of the Hummingbird above the flower; there is something beautiful about the Quail as it leaves its retreat in the chaparral and is off with a *whirr* to a place of safety, and we all love and admire the beautiful songs of our small birds, but where is there an equal to our sublime family of Raptore?

The White-tailed Kite is associated with my earliest experience in Ornithology. Some seven years ago I fell prey to the mania of collecting birds eggs, which was prevalent to a great degree in my locality. At that time I was spending a few months on my uncle's rancho in Santa Clara county with an Eastern cousin. It was in June when the unsurpassable climate and soil of California had caused a luxuriant growth of "suckers" to form on the grapevines, and thenceforth life had no charms for me, as it was agreed by all that I had talent in the line of pulling the "suckers" off the vines and accordingly the work fell to my lot.

Next day I was installed in my position, and as I worked back and forth on the rows I had abundant time for meditation. I speedily began to think about my vacation, and came to the conclusion that a half days' fishing would be a grand thing. That evening I laid the plan before my cousin who consented and the following afternoon was named as the time. Without going into details we did three days work in one forenoon and were given the afternoon as a token of appreciation.

It was with light hearts that we swung our poles over our backs and started up the dusty road for a certain spot in the foot-hills. I was as enthusiastic an oölogist as ever and though it was somewhat late I kept an eye out for nests. Finally we crossed a field of grain which was thickly studded with small black oaks and while carelessly passing under a tree I noticed a California Towhee's nest. I immediately climbed the tree but the nest proved to be an old one. Before descending, I paused and gazed into the top of the oak and the sight I saw was one I had met only in my most sanguine dreams. There, not ten feet above me was a large nest of sticks, and I lost no time in making the ascent. As I gazed over the edge of the nest two half-grown birds bristled their feathers and crowded to the farther side, while snapping their beaks. In the center was one rotten egg. I immediately announced to my cousin, "two young chicken-hawks and a rotten egg." I argued that any bird of prey that built a large nest of sticks in a tree was a "chicken-hawk," and was consequently seldom in doubt as to identity.

The nest in question was about a foot and half in diameter and was made entirely of sticks and twigs from some dead oak tree. The depression was very shallow. It was placed in the extreme top of the black oak tree, and rested on the top of a bunch of limbs, rather than in the fork of a single branch. The nest was over twenty feet from the ground and the tree was easily climbed. The half-grown birds showed fight and it was only by the use of my fishing pole that I succeeded in getting them to *terra firma*. During the whole proceeding the parent birds did not show themselves and as stated I concluded they were "chicken hawks" so we took them to a friends house two miles distant and killed them, but I very much regretted doing so after I had correctly identified the birds.

My friend told me the old birds hannted his place for several days after, uttering mournful notes. As I remem-ber them, the young birds were light plumaged, with a few dark feather on the back.

I took the egg home and though it was rotten, blew it endways and after wards exchanged it to a neighboring collector for a Catbird's egg. This Kite's egg was quite heavily marked and was between a Kestril's and a Red-shouldered Hawk's egg in size.

Almost every season since I found my first White-tailed Kite's nest. I have visited the locality and have always been able to find one or more birds hovering over the tree tops. During the heat of the day they are content to rest in the shady oaks, only now and then venturing forth in quest of food, but as dusk approaches and a cool and refreshing breeze is fanning the heated fields the Kites can be seen performing their beautiful evolution, now skim ming almost out of sight in the distance and then returning to some favorite perch. Their flight at dusk has given them the name of "Nighthawks" by local collectors. The Kite feeds upon lizards, and small mammals and reptiles, thus rendering an important service to the farmer.

On April 29th of this year I paid this locality a visit to look for the nests of the California Jay and Thrasher, but after a long and fruitless tramp I turned my steps toward home, and while crossing a field, similar to the one described, I noticed a Kite soaring about and soon its mate came in view. This filled me with new ambitions, as it was just the time for them to nest. I watched them closely and both alighted in a white oak tree, but as the tree had but few leaves, I saw there was no nest. Then one sailed away again and hovered for some time over a large live oak, and I made for the tree. It was some fifty feet in height and in the crotch of the

loftiest limb I could see a dark object which I took to be a nest. Full of hope I was making desperate efforts to reach the first limb when I heard footsteps and a moment later a voice, which I knew came from one not long from the old county. I slid down and stood face to face with the owner of the field, who seeing me tramping through his grain, had come to have an explanation. "Haf you lost anything?" he excitedly asked, while I gazed longingly at the black spot in the top of the tree. I replied I didn't miss anything, whereupon he informed me I was a trespasser and tri d to impress upon me the gravity of the situation. I responded by offering him a quarter to let me climb, but he could not be bribed and I was obliged to take a short cut out of his field.

On May 3rd, I again visited the spot and by crawling a distance through the grain reached the tree and made the ascent. Sure enough it was a White-tailed Kite's nest but a last year's one. It measured twenty inches across and was very shallow. It was made of sticks of all sizes up to a lead pencil and was loosely constricted. It had evidently been lined with grass, which had now partially rotted. In the same vicinity I observed three pairs of Kites, but the manner in which they acted, indicated they had not yet built. I found the tree in which they had roosted nightly. The body of the tree and all the limbs were completely covered with excrement. I regret I could not have made a trip to this place a week or two later as probably two sets at least were deposited in that neighborhood.

This Kite is not an uncommon breeder in this Valley though they seem to favor certain localities, and seldom go any distance from their breeding grounds. Two or three years ago a friend collector took a set of four hand some eggs from a nest in the top of a white oak in the center of a field.

The White-tailed Kite has pure white

head, breast and tail. The back is gray and the shoulders black. Its flight is graceful and easy, but as Davie states, not rapid. I watched one this year which was apparently bound for some distant point, and its flight appeared labored. When soaring about the fields the Kite utters a short sharp whistle at frequent intervals and this will often attract one's attention, though the bird may be obscured by the foliage of the trees.

PRairie Falcon.

This beautiful Falcon also inhabits California, breeding in wild and mountainous localities. It is perhaps the most daring of any of its family, and does not hesitate to attack animals of greater weight than itself. It preys largely upon quail and other birds that occur in its locality, and seldom if ever, feeds on a dead body, but prefers to pursue, overpower and kill its prey. The Prairie Falcon is handsomely plumaged at certain seasons of the year. The back is brownish-black and the head perceptibly darker, while the breast varies from a buff or creamy-white to pure white. The female is larger than the male, measuring some 20 inches in length. This Falcon is extremely shy and to approach within gunshot of one is a difficult feat.

This bird usually inhabits the wild mountainous regions of this state and are not by any means common breeders. Mr. Samuel C. Evans in a conversation with a friend, recently, spoke of collecting sets of the Prairie Falcon at a point in the mountains not ten miles from San Jose, but though a number of collectors as well as myself have visited the locality in quest of Golden Eagles' eggs we have never met the bird. Mr. Evans did active work in collecting eggs of the Raptorese several years ago in Santa Clara county, but I am of the opinion that this Falcon, as well as other rare species have forsaken the

localities mentioned owing to the approach of civilization.

The eggs of the Prairie Falcon exhibit the beautiful markings characteristic of the family of Falcons. I have before me a set of three eggs from the collection of Mr. A. Halsey of this city. They were collected for him by a friend in the mountains near Colton, San Bernardino Co., Cal. The nest was constructed of sticks and placed on the summit of an almost inaccessible cliff, and was reached only after a perilous climb. The eggs exhibit the following dimensions: 2.06x1.56, 2.13x1.50 and 2.12x1.50. The ground color is a creamy-white, and two of the eggs are heavily blotched and clouded with burntumber and various shades of brown so as to almost obscure the background, while the third egg is lightly marked with small dots and specks of brown. They form a handsome set.

The party by whom the set was collected, visited the nest the following season and was rewarded with a set of two eggs of the American Raven, which resembles closely eggs of the American Crow in color, but are of course much larger.

C. BARLOW,
San Jose, Calif.

Nesting of the Brown Creeper.

May 30, 1891, I visited some islands in the Mississippi river a couple of miles below Davenport, Iowa. On one of these were a number of dead willow stubs. While sitting in the boat waiting for a friend, I saw a pair of Brown Creepers alight on a large stub about 20 feet above the ground and disappear under a large strip of loose bark. On climbing the tree I found between the bark and the tree trunk a nest composed of wool and other soft substances and containing 3 young birds a day or so old. This is the first instance ever reported, as far as I am able to ascertain, of these birds nesting in Iowa or Illinois.

Burriss H. WILSON,
2023 Rock Island St., Davenport Ia.

July Contest.

Prize winners and credits received by each were as follows.

1. A Study in Orange and Black, 258
2. Birds as Pets, 200.
3. The Chimney Swift, 150
4. Life of Alex. Wilson, 85
5. American Magpie, 82.

The article Among the Least Bitterns was awarded one year's subscription.

The following were the winners of the Judges' prizes and the order in which they named the winning articles in their decision. No one named them in their correct order. There were 57 Judges.

1. No. 3. N. G. Van D. Water, Gretna, N. Y., 1, 2, 3, 5, 4.
2. No. 1. Ed. Doolittle, Painesville, O., 1, 3, 2, 4, 5.
3. No. 19. L. R. Kirke, Jr., Rising Sun, Md., 1, 3, 2, 5, 4.
4. No. 20. Millard Van Wagner, Gretna, N. Y., 1, 3, 2, 5, 4.
5. No. 13. J. R. Nowell, Predmont, S. C., 2, 1, 3, 4, 5.

The following parties were awarded a World's Fair almanac, on account of naming the prize articles:

- C. B. Johnoon, Minn
- Cyrus Crosby, N. Y.
- Deah Sweet, Me.
- L. H. Stratton, Ill.
- Edmmnd Heller, Calif
- W. Crane, Ia.
- Ray Daniels, Calif.
- Hubert Fuller, Conn.
- J. S. Griffing, N. Y.

The Fair.

In a trip to the Fair, one should endeavor to get a general insight of the exhibit as a whole, but also devote most of the time to any social, preferred department. The fisherman spends most of his time at the fisheries building where are found all kinds of appliances for the capture of the finely prey from a minute fish hook to a seine fifteen hundred feet long.

There are also to be seen hundreds of species of fishes, either stuffed, in spirits or represented by life-like casts in plaster-of-paris or gelatine. A vast aggregation of live fishes are also exhibited, both salt and fresh water species in the large glass aquaria. With the fishes are also shown groups of stuffed fish-eating birds, which are mainly composed of cormorants, ducks and herons. Many kinds are to be met with, from the smallest terns to the mighty albatross.

At the government building is to be found a fine exhibit of specimens from the Smithsonian Institute. This collection, though only a fraction of the National exhibit at Washington, is altogether the largest and finest, as well as best labeled display of birds, mammals, etc., to be seen at the Columbian Exposition. Not only are nearly all of the birds of North America to be seen mainly presented in systematic relations, class, order and family, but many foreign species are shown. The Emu and Apteryx from southern parts, as well as rare oriental and boreal birds are mounted and displayed with the same fidelity that is observed with the home birds. It would be next to impossible to give even a hasty sketch of the cases of treasures shown, and the advice is offered here, to those who are so fortunate as to visit the Fair, that attention should be given to this exhibit, for it may be honestly said that the show is a very fair representation of the Smithsonian Institution.

Birds are not to be found everywhere and there are very few buildings which are not ornamented with the work of taxidermists. Nearly all of the State building are more or less supplied with specimens and several show nicely appointed collections. There is however one notable feature of meager quality in a few of these exhibits where in a desire to make a good showing the State authorities have allowed specimens to

be shown which are not taken within the state boundaries. These instances are certainly unpleasant to the feelings of all naturalists who understand the distribution of our birds and mammals, and certainly do not reflect credit on the persons in charge.

Many of the foreign exhibits are of interest, but it is readily seen, that with few exceptions, the work of foreign taxidermists does not equal that of our home workmen.

There is danger that visitors will miss some important exhibit. In fact one might prolong his stay for months and then after leaving discover that some interesting exhibit had been overlooked. This condition is unavoidable, and to prevent any readers from omitting one building, which to me, is all important, attention is called to an often neglected quarter of the grounds. In the south-eastern part of the grounds and in a section of the park too frequently neglected, is the Anthropological building. It is next to the Foresting department, and if one will turn to his map of the Fair, he will see that this building is by no means a small one. A visit will convince an observer that it is one of the most interesting spots on the ground.

Ward's exhibit of fossils, mammals, birds and reptiles from Rochester is found here. In it may be seen the celebrated Hairy Elephant in the restored form, with tusks ten to fifteen feet long. A Mastodon's skeleton is articulated and rises massively above all creatures of the present day.

Next to this display is LATTIN & Co.'s exhibit of eggs, birds, shells, etc. One is liable to meet some of the collectors there, while the pleasure of looking over the well-arranged, properly labelled series of eggs is sure to pay a visitor for the time spent. Visitors to Chicago are also invited to call at the store, No. 3571 Cottage Grove Ave.

I have already occupied my allowance of space and must subside for the present.

SPECIAL.

Notice.

All persons wishing to exhibit specimens or mounted work relating to Natural History, at the next annual meeting of the Western New York Naturalists Association should communicate with some one of the exhibition committee as given below and oblige.

Aug. 21, 1893.

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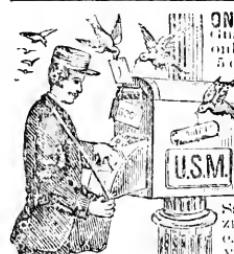
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Life Histories of Birds, Gentry, 2 vol., each.....	2.00
Our Birds in their Haunts, Langille.....	2.50
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You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than the *first* of *next* month. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

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VOL. X.

ALBION, N. Y., OCT., 1893.

NO. 10

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges," "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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THE OÖLOGIST.

VOL. X.

ALBION, N. Y., OCT., 1893.

NO. 10

SCENES FROM THE LIFE OF ALEXANDER WILSON.

The First Volume of the American Ornithology

G. VROOMAN SMITH.

VII.

We now come to that period in Wilson's life to which he looked forward, from the time he entered upon the profession of an ornithologist with anxious expectancy. The time when he was to see his fondest hopes realized—the publication of his American Ornithology. The year 1807 wrought important changes in the career of Wilson. Mr. Bradford, a publisher in Philadelphia, contemplated publishing an edition of Ree's cyclopaedia and was looking about for an assistant editor. Wilson was recommended to him as a person well qualified to superintend the work and his services were immediately secured. He entered upon his new duties promptly and with all his heart. At last he had emerged from the obscurity as teacher of country school and was engaged in an employment which gave him abundant opportunity of making the acquaintance of learned men.

Led by the desire of beholding the maturity of his plans at once, he had not been long in the employment of Mr. Bradford before he made known to him the desire of his heart. Mr. Bradford needed nothing further than an explanation of the nature and object of the work to convince him of its inevitable success if published. He readily consented to become the publisher and furthermore agreed to bear the necessary expenses for an edition of two hundred copies. What transpired in Wilson's mind when he received the

approbation of this influential person may be better imagined than realized. The darling hope of his life now seemed within reach—the publication of his ornithology in a manner answering to his imaginations and desires.

With the support of Mr. Bradford and the indefatigable labor of Wilson the work progressed rapidly. He relinquished his position of assistant editor of the cyclopaedia and lent all his efforts to his own work. His only means of support now was that received from the coloring of his own plates, and that was far to small to meet the necessities of life. He applied himself so closely to coloring his plates and correcting the imperfections of assistant employees that the hours of rest were encroached upon and the result was, his health became seriously impaired. His friends advised him to travel about; and thereupon in August, 1807 he left Philadelphia for a tour through the state of Pennsylvania. On this journey he enlarged his collection of specimens and procured much additional information. This pedestrian excursion seemed to have repaired his shattered health for after a few months of roughing it he returned to his work with renewed vigor, and devoted every moment to his plates and manuscripts.

Another year of incessant toil rolled by before the first volume of the American Ornithology with all its splendor and magnificence was given to the world. In September, 1808 the superb volume left the printers and Alexander Wilson with joy as great as the astonishment which greeted his efforts, at last beheld the proud moment of his earlier expectations—America had given to the world an original work in science. A work which could in every way rival the best productions of Eur-

ope. And why do we lay so much stress on this adopted foreigner's efforts? Because the science of ornithology was in its infancy; aye, in its embryonic state till Alexander Wilson, that devout child of nature, by years of patient toil, study, poverty and discouragement at last brought forth from its obscurity the science that has enlisted in its service minds of the very highest order. Because there is not to be found in that long line of his illustrious followers one who has led a life abounding in such depressing circumstances and still has given to the world a monument of industry to be compared with his efforts. Those of you who have read an account of his life cannot but rejoice to think that we are living in an enlightened age. An age when our beloved science is encouraged rather than discouraged. Briefly review again the circumstances under which his work was brought forth. Consider the life of penury he led and then consider what that life gave to us. Eight years previous to the appearance of his first volume —years in which most if not the whole mass of his knowledge of the subject was gained, were years spent in wrestling with disappointment, poverty and sickness. In all that time he worked patiently and thoroughly, scarcely receiving any outside aid in the furtherance of his designs. Finally let us think of him as he leaves the abode of civilized man, launches his canoe on unbroken waters, depends on his rifle for subsistence, keeps on his solitary march till the bird has sung its evening song, and then lies down to rest with no society but the hoot of the Owls and no shelter but the star-lighted skies. And after all due consideration let us attribute to Alexander Wilson the praise his great work deserves.

Although twenty-five hundred copies of the prospectus, setting forth the character of the work had been sent to different parts of the country, yet when the real work greeted the public no one

was prepared to welcome so fine a specimen of art. No one entertained an idea of the grandeur and com leteness of the work. Little wonder that it met with so little patronage when we consider how expensive it was. The taste for such luxuries had not yet been formed in this country. Those who had manifested an interest in the science were mainly persons of limited circumstances. Thus being an ornament to the shelves of the rich or shut up in the libraries of learned institutions it was a sealed book to those who really were in need of its benefits. Wilson himself realized the position his book was likely to hold in the public favor, and his plan was to publish a second edition in four volumes, with drawings on wood. This edition would have circulated more generally and would likely reach the hands of all who were interested in the science, as it could have been sold at a very low figure, as compared with the cost of the original edition which was one hundred and twenty dollars. But unfortunately he died before the ninth volume of the first edition was completed.

In the latter part of September, 1803 he writes to Mr. Bartram: "In a few moments I set out for the eastern states, through Boston to Maine, and back through the state of Vermont, in search of birds and subscribers." It was with a feeling of timidity that he set out in search of patronage; for as he says "the bearer of a subscription paper is seldom welcomed with rapture." He felt that even if he should fail in securing subscribers he at least could gain a greater familiarity with nature's objects. Accordingly he writes to a friend, "I am fixing correspondents in every corner of these northern regions, like so many pickets and outposts, so that scarcely a Wren or Tit shall be able to pass along from York to Canada, but I shall get intelligence of it."

Thousands of learned men examined his book; and although only a few en-

tered their names as subscribers, yet he received expressions of the highest admiration and esteem from all. He exhibited his book with some success at Princeton college, Newark and Elizabethtown in New Jersey. In New York he found a few subscribers and many admirers. The professors of Columbia college particularly expressed their esteem for his performance. The professor of languages being a Scotchman, and also a Wilson, gave him great encouragement and would have done him any favor in his power. Tom Paine, the author of the "Rights of Man" was then residing at Greenwich, a short distance from New York. Wilson desired to visit the man about whom so much had been said, and who was now in the yellow leaf of life, being something over seventy. Wilson said he found him sitting in his nightgown, at a table covered with newspapers and material for writing. Paine examined his book with great attention and was so well pleased with it that he entered his name among the list of subscribers. He spent a whole week traversing the streets of New York, from one house to another. He said "he became as well known as the public crier, or the clerk of the market, for I could frequently perceive gentlemen point me out to others as I passed with my book under my arm."

On the 2nd of October he left New York for New Haven, Middletown and Hartford where he received a few subscribers and much encouragement. At Hartford an editor of a newspaper expressed the highest admiration of the work, and paid many handsome compliments to it in his paper. Wilson writing to a friend said "that compliment is a species of currency that will neither purchase plates or pay the printer; but, nevertheless it is gratifying to the vanity of an author, when nothing better can be got."

The morning following the evening he arrived in Boston, he sought out

Beacon Hill, an eminence overlooking the city. His eyes were directed to see that spot so justly celebrated in American history, Bunker Hill. A gentleman pointed out the spot to him and he immediately explored the way thither. He inquired if there was any one still living in the vicinity who was engaged in the battle, and he was directed to a Mr. Miller, who was a lieutenant in that memorable affair. Wilson introduced himself without ceremony, shook hands with him, and told him that he was proud of the honor of meeting with one of the heroes of Bunker Hill. They proceeded together to the place, taking with them another veteran who had been in the same conflict. With these veterans he spent three hours upon the field; the most interesting he says, which he ever passed in his life. As they pointed out to him the route of the British—the American line of defence—the spot where Warren fell, and where he was thrown amid heaps of dead, he felt as if he himself could have encountered an army in the same glorious cause. The old soldiers were delighted with his enthusiasm, and, after drinking a glass of wine together, they parted with regret. He said, "no pilgrim ever approached the tomb of his prophet, with more awful enthusiasm, than he felt as he drew near to that sacred ground; and great was his wrath, to find that a wretched pillar of bricks, was the only memorial of those who had shed their blood for their country."

He proceeded eastward through Massachusetts and New Hampshire to Portland. From Portland he travelled through New Hampshire, stopping at Dartmouth college, where he said the professors were extremely obliging and attentive, particularly the president who subscribed; thence through Vermont to Albany and home by the way of New York. The whole number of subscribers procured during this tour was only forty-one.

Raptores of Michigan.

BY SCOLOPA.

Part Four.

THE EUROPEAN BUZZARD, *Buteo buteo* L. This straggler from the old world, not rarely taken at the North on the eastern coast of N. A., has been twice recorded from Michigan. Exact reference not now at hand but can be furnished if desired. At best it can only be embraced as an irregular visitor.

SWAINSON'S HAWK, *Buteo swainsoni* Bonap. I have never met with this species to my knowledge, but have, nevertheless always thought that it was more common than credited. A few have been recorded from various parts of the state. In time, and when competent ornithologists shall be found in nearly all sections of Michigan, it may be reasonably expected, that the Swainson's Hawk, will, at least be generally known as a yearly visitor to the peninsular State.

BROAD-WINGED HAWK, *Buteo latissimus*. Wils. In the Northern part of the state, this species may be abundant, though it is not reported so, that I can learn. In Southern Michigan it is but little known, and many ornithologists have collected for years without seeing a bird. Still scarcer are the successful ones with the eggs. As an evidence of its rarity here, in the breeding season, I will say, that in over five hundred nests of the *buteos* which have been robbed by the collectors of this (Kalamazoo) county, only one set of eggs of this Buzzard was taken. It may be safe to add that I suspect the identity of Hawk's eggs is not always accurate. In fact I suspect that nests of this bird have been found and overlooked. The advice is given, that in all cases of doubt, the bird should be secured when the eggs are removed.

In late May, 1875 two of us were

hunting and collecting in a piece of low woods where we often went. Jim saw a Hawk sailing leisurely through the woods. He followed it and shot the bird which proved to be of this species. As the Hawk was rare to us, having previously only been seen in migrations we were much interested in the note and began to look about although we did not expect to find eggs owing to the lateness of the season. We quickly spied a suspicious mass of rubbish in a large white ash only a few rods away. When we approached the tree we were much pleased to see the old bird fly off. She alighted in an adjoining tree and was easily bagged.

It was a very warm day and so we * disembowelled our specimens and packed the cavity with dry materials on which was dropped a little carbolic acid. An examination disclosed the fact that the mother bird was engaged in laying, and we at once laid our plans for sealing the ash tree which was nearly seven feet in circumference two feet above the ground. The trunk ascended all of fifty feet without a limb. In those early days we knew nothing about climbing irons and our bird-nesting was the hardest kind of climbing in many cases. After much scrambling and puffing, together with a good deal of boosting from below by my companion with a long sapling and crotch, I managed to reach the nest, which was built like the nests of the other *buteos*, as near as I could judge. It contained two eggs one of which was well marked and much like the usual description, while the other was of dirty white ground color with a very few markings. The eggs can be distinguished from those of the Red-tailed and Red-shouldered Hawks both by size and markings,

* All birds which feed on flesh become putrid in warm weather within a very few hours after death unless treated with some antiseptic. Another method I often adopt, and this is particularly adapted to cases where birds are to be sent by mail or express, is to fill the eviscerated body with powdered charcoal.

in fact I do not know of any other species of Hawk's eggs for which they can be mistaken in this region. To those who do not possess eggs of this Hawk, and who are so fortunate as to have access to Capen's work, it will be found that the plates are an excellent representation of this Hawk's eggs. The size of the eggs are a little less than those of the eggs of the Red-shouldered Buzzard. Davie gives the average as 1.90x1.54 inches.

The nest was built in a huge crotch and after the manner of the other Buzzard-hawks. The spot was little visited, the locality selected being a low, wild piece of woods. This is the usual choice of this Hawk, as recorded by collectors and observers. It seems strange to me that a species of the Hawk family so constant in its choice of wild and little frequented regions, should be so easily approached and shot. Yet this inattention to its safety is a well known feature of the Broad-wing's habits, and many writers mention it.

Most writers refer to this species as one which builds in high trees, but others say that their choice varies greatly. It is certainly a Hawk which selects wild localities, and from this fact is the reason that it is little known in well populated districts except during migrations.

RED-SHOULDERED HAWK OR BUZZARD, *Buteo lineatus*, Gmel. This is our commonest Buzzard Hawk and is undoubtedly the best known of all the family. It, in common with the Red-tail bears the name of Hen-hawk and Chicken-hawk; terms which are hardly fair, as the two Buzzards rarely seriously infest the barn yard, and especially is this true of this Hawk. This bird also bears the old name of Winter Falcon, which is of course entirely improper as it is in no sense a Falcon. It is not rarely found with us throughout the winter months, but is evidently no more hardy than the Red tail, which

certainly averages ten to twenty days or more earlier in nesting. Generally arrives in late February and departs from our state in late November, but I have seen it here in very severe weather in December and January.

Not long after arrival the pairs, evidently mated upon their appearance, select sites for their nests. They are not as constant to a favored site as the Red-tail; in fact can never be depended on to visit a nest for a second season. I have known a pair to do so however, and also to choose an old nest of the Crow or that of their near relative the Red-tail.

The locality selected is nearly always a low woods the species rarely nesting on high ground, and never to, so far as my experience goes, far removed from water. Many hundreds of nests of this Hawk have been visited in this vicinity and any quantity of eggs have been secured by the collectors of this county.

Mr Richard Westnedge of Kalamazoo, than whom no more reliable collector lives in the state has devoted much time to the nesting habits of the Hawks of Southern Michigan. Since April, 1888 he has kept a careful record of the nesting habits, sites, localities, etc. of this Hawk. I cannot do better than to give his summary in his own words. He says:

"Sixty-eight sets of Red-shouldered Hawks eggs taken since April 21, '88. Of these one each was in birch, soft maple and basswood; two in tamarack; three each in hard maple and sycamore; five in hickory; seven in oak; eight in elm; fourteen in beech and twenty three in ash trees. The lowest built nest was only twenty feet up and was placed in a birch tree; the highest was in an ash and at ninety feet. The largest set was one of five eggs, the smallest incubated sets were three of two eggs each. Three and four are the usual sets. The earliest set was taken April fourth; latest first set fresh, May third; latest

second set May eighteenth. About April fifteenth is the best date for collecting the eggs. Sometimes, but seldom found in dry oak woods, but always near marshy ground."

The nest of the Red shouldered Hawk is easily found. It is built after the manner of the structure of the Red-tail and is indistinguishable from it when viewed from the ground. There are some collectors who claim that the nests of the two species can always be told apart, but I must confess that I have been unable to distinguish the species from nests alone. However it is usually not difficult to decide, if the nest is in high oak woods and contains only two large eggs, that the structure belongs to the Red-tail. Again, if the nest is in low woods and contains three or four smaller eggs, it is fair to judge that the Red-shoulder owns them. Nevertheless, I have seen sets of these eggs of the Red-shouldered Hawk which were larger than three eggs from one nest of the Red-tail. And too, the Red-tail often selects the exact locality chosen by the smaller Buzzard. Therefore a collector must be careful and not rely too fully on shape, size or coloration of eggs, or locality of nest. I do not doubt that many collections, some of which belong to renowned collectors, are supplied with sets of Buzzard's eggs which are improperly labelled.

Many eggs of this Hawk are very beautiful and the markings in various shades of brown and red are pleasing to the eye. The variations in coloration and markings are much greater than in the eggs of the Red-tail, and it is needless to describe them.

A trip after the eggs of the Red-shouldered Buzzard is a most interesting expedition, and if made in the right locality cannot fail to be productive of good results, particularly if one of the party is an experienced collector and fearless climber. It is best to go into the woods in March and watch the

birds intent on selecting a nesting site, as they are very noisy and active at that time. Having located several pairs of birds, the proper undertaking is to visit the woods regularly and keep track of the progress the birds are making in nest building or repairing and incubating.

A collector who has plenty of time to devote to the work should have brilliant success and I feel safe in saying that there are several collectors in this city who could, if unhampered, and no others to bother them, collect a hundred eggs of this Hawk alone, in addition to other collecting in a season.

It is however rare indeed that a collector is free of all duties; for school work engages the attention of the most of the collectors at a time when the Hawk's egg-harvest is in season, and with the older ones the duties of business demand attention. From these causes but very few days are spent in the woods by the enthusiasts around here. I know several young fellows of this vicinity who have collected for years. One of them was a painter, one a tinner, a machinist, college student, etc. Available days for collecting were few, and generally the time between Saturday night and Monday morning was selected for long trips, while the eyries near to town were visited after the work of the week day. Of course all of the ground could not be covered in one day even though the collectors set out in different directions.

Many are the yarns I have heard and many good jokes were played on the unlucky ones. It was not rare that one egg-crank would rob a Buzzard's nest which was fondly considered hidden by another crank who expected to take the eggs. When crank No. 1 at last climbed the tree he found a note pinned in the nest by crank No. 2 which informed crank No. 1 that he was a trifle late as some one had been there before him.

THE OÖLOGIST.

Occasionally a huge tree was selected by the Hawks which was insurmountable, and which existed for years without a robbery of the coveted eggs. But at last we were honored with an enthusiastic collector who knew no danger and was indefatigable with climbing irons and blow pipe. He soon scaled all difficult trees and I feel safe in saying that there is not a tree in this section which will cause him to falter.

The Red-shouldered Hawk is a very noisy bird, and without doubt the noisiest species we have. This is especially noticeable during nest-building and at the time when the young leave the nest. At the latter time a family of Hawks will easily convince an uneducated stroller that there are a dozen or more screamers in a patch of woods.

Although the bird does not seem to have the attachment for a particular nesting site which the Red-tail exhibits, still it is rare for a pair of birds to quit a locality unless the woods are cut down. Year after year the Red-shouldered Hawk returns to the same patch of woods and submits to spoilation by the town egg-collector.

Auld Lang Syne.

Of all the various scientific recreations, few will dispute that nature presents the widest and most edifying fields in which to exercise our thoughts. For an intelligent mind, nature has a natural inspiration! The boundless ocean, the lofty mountain, the majestic river with its surrounding landscape, are each to him a "chef d'œuvre" of a unique past Master, against which the feeble, though noble efforts of our mightiest minds, stand rebuked, as the merest trivialties.

Everything in nature, commands our unqualified admiration: from the lowly weed to the noble oak, and the multi-colored birds, insects and flowers, naturally turn our thoughts to Him who made them.

This study of nature, in which the poorest individual may participate, presents such an infinite variety of subjects, as almost to bewilder the imagination, and it would require thousands of years, for its greatest devotee, to gain an insight into the knowledge of its wonders. However, by pursuing one of the various lines of study, one may hope to become tolerably proficient in its mysteries.

In choosing any special path, one must be guided, so to speak, by the chemical affinity, or rather inspiration, as well as by circumstances and resources. For me, "Ornithology," always has been, and is still with Oölogy the most delightful study extant.

I doubt not that the majority of the collecting subscribers of the Oölogist hold the same opinion with myself.

I further expect, that with me, many of your readers would admit that collecting specimens has been intimately linked with some of the proudest and happiest moments of their lives. The delight one feels in the wood, field or along the banks of the stream, (on certain occasions, when some rare, unexpected set is met with and secured for the cabinet) is untranslatable, and cannot be adequately described on paper.

I recollect twenty years ago, when a mere child, the inexpressible joy I felt on finding a crow's nest (*corvus corone*) in England, with three eggs. I thought they must surely be ravens, they were so large and beautiful, and I remember also with what regret I left two for the old bird, according to instructions in my bird book, which was, if I remember correctly, the Rev. J. C. Atkinson's *British Birds, Eggs and Nests*.

The first Kestrel (*Falco Tinnunculus*) I took, containing six very fine eggs, gave me unlimited pleasure. I rated them Peregrine Falcons' at least. The circumstances are still fresh in my memory. I was then clerk in my uncle's store, and worked from 7 a.m. till 7

p. m. I arose that May morning at 2 a. m. and called on a young friend, whom I had interested in Oölogy, to go with me, but the muscular arms of Morphens prevented, and I went away disgusted with my friend's tranquil indifference and started alone, as happy as a lark, and as confident as Julius Cesar of success.

After walking over two miles, and taking a beautiful Lesser White-throat's egg, from a nest built in weeds, containing three, I proceeded to cross a low meadow on the banks of the Great Ouse. I had scarcely crossed the paling when a Red-leg Partridge flew from a patch of rank grass right in front of me. I almost trod on the nest, which contained eleven eggs of a creamy buff color, minutely speckled with dark brown. This was a new acquisition to my cabinet, and my conscience smote me as I took four of the prettiest, two for myself and two for my sleeping friend. Before I had crossed the meadow I frightened an old Mallard from her nest, which was built in a hollow at the top of an old willow. The nest, which was full of feathers, contained ten eggs, of which I took four, but only saved two and that with difficulty, as they were almost on the point of hatching.

Leaving the meadows I crossed to a small copse or wood of spruce fir and had scarcely entered when a Ring-dove flew from a low tree to my right and sailed deep into the wood. After a little searching, I discovered her rude platform of twigs, on which were deposited two beautiful, white, glossy eggs, elliptical in shape. I left one, hoping to find another to make a pair. I collected in pairs then!

While walking slowly along, packing my eggs, I heard a Hawk screaming, and following the sound with my eyes, saw a magnificent Kestrel fly into the top of a tall fir. My excitement was intense. I had never taken a Hawk's egg in my life, and had a

special longing to distinguish myself amongst the Raptore. Promptly climbing this memorable spruce, which had limbs from the ground up, I soon caught sight of the nest. On reaching it I would not put my hand in, until I had first looked in the nest, which a moment later I did. Oh, thou ardent lover of fine sets, imagine six glorious eggs, the most beautiful I had ever seen, marbled, mottled and veined with brick red and sienna, on a deep buff ground. I almost fell from the tree in my excitement. It was truly a moment of indescribable bliss, and one that will never fade from my memory. I must here confess, I bagged the whole set, contrary to all rules and precedents. Five eggs is the usual number laid by the Kestrel, one of them generally being much smaller than the rest. I reached home at 6 a. m. delighted at my new acquisitions, and incurring the envy of my sleepy friend, who however, received his share. This happened in 1891, and though my collection has vanished, the memories still remain.

I am still in the field, though on this side the herring pond, devoting my leisure moments to the same delightful study. The birds of North America are comparatively new to me, as well as the eggs, and in this fact rests the assurance of many delightful days to come.

I see birds almost daily that are new to me, and have found many beautiful nests and eggs, which however has necessitated the killing of some birds for their identification.

The Cardinal Grosbeak (*Cardinalis Virginianus*) which is a constant resident here, excited my admiration on first beholding it, with its beautiful crest and gaudy plumage, and afterward by its strong melodious voice.

The Yellow-billed Cuckoo, with its strange note and peculiar eggs so unlike *Cuculus canorus* has greatly interested me also. I found a nest of

this species with three almost fresh eggs on Aug. 17th, 1893. Is not that unusually late?

WM. WAKE,
Knoxville, Tenn.

The Marsh Hawk and Its Eggs.

One morning in June a farmer stood in his yard with a loaded gun in his hands watching a pair of *Buteos* lazily circling overhead. While thus watching, a Marsh Hawk came skimming over the wall and picking up a chicken was away with its quarry before the slow, rustic battery in the farmers hands could be brought to bear on it. It is for such occasional forages, that this useful Harrier is shot by the average farmer. But fortunately there are some farmers who can and do appreciate the usefulness of this Hawk. He destroys those pests of the farmer, the mole, gopher, rats, mice and a great number of snakes. Whence he receives his various epithets; as Mouser, Snake Hawk and Mole Hawk. After or during such a life of usefulness, should this bird be hunted, shot and killed?

It plainly shows the ignorance and stupidity of the average farmer. In spring the country boy finds its nest and marks the spot. He waits until the young are hatched and then proceeds to wring their necks.

The nest of the Marsh Hawk is generally a bulky affair, anywhere from an inch to a foot high, and from about a foot wide to two feet. Some times it builds no nest at all but simply deposits its eggs in some small depression in dry sphagnum moss or some similar substance. In such cases the bird builds no nest for the purpose of better concealing her eggs. On the contrary some of the nests are extremely large. They are sometimes built large for the reason being always built in a swampy place they are in danger of being submerged by the water and are therefore built large for the purpose of avoiding

this danger, but the general cause of these large nests are the results of nesting in the same spot for a series of years, each year the bird adding more to the nest in repairing it for use.

The usual number of eggs in a set of the Marsh Hawk is three, sometimes four or five and but rarely two. When first laid their color is a greenish blue, fading before the clutch is complete to dirty white which color is given by the closest oölogists as the true color of the eggs. Sometimes the eggs are marked over with a dark chocolate color, but commonly are not. The choicest sets of eggs of the collector are those that are marked.

Extreme sets are sometimes found; as many as seven in a nest. More than that have been reported before, but the cases are improbable. Many facts tend to show also that the two birds, (Marsh Hawk) which lay marked eggs one season will lay marked eggs every season; and those that lay plain or unmarked eggs one season will ever after lay plain eggs.

There are facts also which go to prove that the two birds that lay a certain size and shape egg in one season will lay the same shaped and same size egg all other seasons. Many authorities doubt that still and i. has never been proven yet.

The Marsh Hawk is perhaps the most noiseless of our breeding rapacie. The cry made by some of them has an intimation of the Fish Hawk, but in general the cry approaches more nearly that of Cooper's Hawk.

To those who have only seen and known the subject of this sketch, as the skimmer of the meadows, floating and quartering spaniel like over bushy low lands he will hardly seem like a being of the upper air. Yet, he has his aspirations, as we may see, the females, after being flushed and shot at, would be joined by the male and hang for hours far overhead, mere specks in the sky, seemingly above the loftiest flights of the *Buteos*.

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OÖLOGY AND ORNITHOLOGY.

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FRANK H. LATTIN, WALTER F. WEBB,
Editors.

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ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

The American Woodcock.

Mr. Black's note regarding the American Woodcock reminded me that I have had quite an extended acquaintance with this peculiar and precocious bird, and as he (Mr. Black) requests further remarks on the subject I am pleased to submit the following notes:

Although I have not had as much time as I should like to study the birds

I have had the good fortune to fall in with quite a number of Woodcocks and my notebooks contain quite an amount of interesting matter regarding them.

The Woodcock on account of its retiring habits is rather a hard bird to study and therefore some of its most interesting and peculiar habits seem to have escaped the observations of naturalists.

In the western states (so far as I have observed) their feeding grounds are, as a rule, in the low wet bottom lands where there is a thick growth of coarse grass and low bushes thus rendering it almost impossible to see the birds when they are on the ground.

In the east, especially in the hilly parts, I have seen them feeding in comparatively open roads where I had very little trouble in seeing and watching them.

Early in April the Woodcocks arrive in the sheltered valleys of southern Ohio and soon scatter and pair to spend the breeding season.

The male bird has a habit of flying spirally up into the air, sometimes higher than the tree tops and while balancing in the air he utters a low droning and not unmusical sound, which can be heard at quite a distance. This is a call to his mate and when he alights upon the ground the female bird is sure to be near at hand to receive his caresses.

The birds often play in a very droll manner, running round and round each other in a small circle, their feathers ruffled, their wings lifted and their long bills pointing nearly directly upward with their heads resting on their backs.

Sometimes they will hop on one foot holding the other at a queer angle, as if it had been broken or hurt. The male bird utters a low indescribable sound during all the playing and the sight of these queer antics is worth more than to have seen Modjeska or Barrett in their celebrated plays.

The Woodcock usually lays four, rarely five, creamy or buff colored eggs, spotted with various shades of slate and reddish brown.

The nest is a slight depression or hollow in the ground sometimes being lined with vegetable down or some such material.

From a series of six sets in my collection (four being of four and two of five eggs each) the smallest eggs measures 1.05x1.59 inches and the largest one measures 1.16x1.72 inches.

A curious habit of the Woodcock is that of removing their eggs to another nesting site when they are disturbed while incubating. I heard of this habit from an old sportsman and afterwards verified it to my satisfaction.

Finding a nest one day I disturbed the setting bird three times and again four times on the next day and on the morning of the third day I found that the birds had removed the eggs during the night and placed them in a new nest about eight feet away where I found the eggs. I had marked the eggs to avoid any mistake. The second nest was a mere hollow in the mossy ground and was in the middle of an open place in tall marsh grass, while the first was neatly enpped and lined with the above mentioned vegetable down.

Another singular habit of the Woodcock that I have never seen noted is that of both birds setting upon the nest in wet or cold weather. In doing this they huddle very close together and face in opposite directions and I have always noted that they have their heads thrown back and their bills elevated to an angle of about forty-five degrees.

I have often seen the female bird carry the young birds in her feet and once saw a male bird doing this.

Their feeding time is mostly at night-fall (dusk) or on dark cloudy days, when they may be seen moving about in a quick jerky and nervous manner

touching the ground with the bill and using the wings and tail as if they were drunk and were afraid of tumbling over.

The bill of a Woodcock is covered with a membranous sheath or network of fine nerves which enables it to easily find its food, which consists almost entirely of slugs and worms, such as are found in bogs or low pastures. The nervous covering on the bill is so sensitive that the bird can distinguish with it, the slightest movement of a worm or slug several inches below the surface of the ground by simply touching the ground with its bill. Sometimes in "oozy" places where the surface will shake I have seen them tap or drum lightly upon the ground with their wings to make the worms stir so that they could tell where they lay and afterward probe after them with their bills.

I have often read and heard that the American Woodcock never alights upon a fence or tree, but I know of two instances where the exception occurred, not by my own observations but by the following which were noted by my fellow-oölogist, Prof. Geo. W. Sabine, of this city.

On Sept. 15, 1872, while out shooting in a grove south of Utica, N. Y., he saw a Woodcock perched upon a branch about 15 feet up in a maple tree.

On Oct. 1, 1875, he "put up" (finished) a Woodcock in Graefenburg Swamp, N. Y. The bird flew about 25 yards and alighted upon an old rail fence.

Both of these instances are facts and may be set down as such as I have known the Professor for eleven years, and his notebook substantiates both of above statements.

The above observations are taken from my field notes, some of which date back to July 3, 1878.

I am yours in the study of Birds,

ISADORE S. TROSTLER,
Omaha, Neb.

Nesting Habits of the Baird's and Carolina
Wrens in Travis County, Texas.

BAIRD'S WREN.

Thryomades bewickii ipilurus.

This very interesting little bird is probably our most common Wren. It is found in all kinds of country, but from my observations, I think it prefers a broken country, and little patches of prairie and mesquite groves, alternating with the timber.

They are fussy little creatures, hardly ever silent, and always keeping up a querulous "chec, chec, chec." Even as early as January the males are great singers, and early on an April morning one can not go far without hearing the sweet and cheerful song of one of these little birds.

In February they can be seen in pairs promenading the back yards, peering into every hole, bird-box and crevice. They seem to be often undecided as to a nesting place, for I have known a pair to start three different nests without any apparent cause. About March 15th the Baird's Wrens begin building their nests mostly in bird-boxes or on a rafter in the barn. The nest is simply a mass of rubbish, but always softly lined with feathers, cotton, or horse hair. Six eggs is a common complement, but as many as nine or as few as four may constitute a full clutch. The eggs are white, more or less speckled with brown of varying shades, and lilac. Sometimes the specks of reddish brown are thickly and uniformly distributed; again they are collected in a ring surrounding the crown or else rather larger specks of chocolate brown and lilac shell markings are more sparingly disposed. A set collected in 1890 was in a beautiful bark, and wool nest placed on top of a post in the eaves of a gallery. It was the largest set I ever collected, the number laid being nine.

The eggs were of a creamy-white background, and lightly specked with brown and lilac. Several albino eggs came under my notice last spring; one was immaculate white, and another was almost white being finely specked with brown; both eggs were in sets of normally colored eggs.

Some of the Baird's Wrens must spend their whole life in Austin, as they are seen all through the year flitting about in the gardens.

CAROLINA WREN.

Thryothorus ludovicianus.

An abundant bird in the bottom land. The Carolina Wren is another fine singer, but spends too much time in scolding Owls and Crows. Often especially in the Spring you can hear a him perched high on a topmost twig of some tall pecan tree pouring forth his melodious song. This bird cannot be particular in its choice of a nesting place, for their nests have been found in hollow logs, under the cornice of a house, in a can placed in small oak tree, and in a crevice in a rock wall. I think the hollow log suits it best as most of the nests found here were in them. The nest is usually composed of twigs, grass, weeds, leaves, cotton, wool, rags, and hair, but in several instances I have found it to consist wholly of wool and hair. There is not as much variation in the eggs of this species, as found in others. Rarely an albino is found in a clutch. The ground color is white, spotted thickly and finely with specks of reddish brown, and salmon, with light spots of lilac, generally forming an irregular ring around the larger end. The ground color is usually concealed. Fresh eggs may be found from April 1st to May 15th. The Carolina Wren stays here in Travis county, both winter and summer, as do most all the breeding Wrens.

JAMES M. ODELL, JR.,
Austin, Travis Co., Texas.

DEATH OF BENJ. F. GOSS.

Expires Suddenly at His Home in Pewaukee.

Benjamin F. Goss, one of the foremost ornithologists of this country, died at his home in Pewaukee, Wis., Thursday, June 6 last, aged 70 years. Death was caused by heart disease and was sudden and unexpected, though he had been in poor health for some time.

Mr. Goss was born in Lancaster, N. H., in 1823. He learned the printer's trade there, and in 1841 came to Wisconsin, where he worked at his trade in Milwaukee for a year. In 1842 he took up land in Pewaukee and engaged in farming. In 1855 he was a member of the Wisconsin assembly. At the expiration of his term of office he moved to Freeport, Ill., where with his brother N. S. Goss he carried on a grocery store for a year. He then went to Waverly, Iowa, and was in the real estate business for two years. Then he moved to Neosha Falls, Kas., where in company with his brother and others he bought a lot of land, laid out the town, erected mills and made extensive improvements. He remained in business there until October, 1861, when he raised a company of cavalry, of which he was elected captain. The company was mustered into service as Co. F., ninth Kansas cavalry, and served until January, 1865.

Shortly after returning from the war Mr. Goss returned to Pewaukee where he engaged in the general mercantile business in which he continued until a few years ago when he retired but still made Pewaukee his home.

His character was of the highest, thoroughly honest and reliable in every situation. His disposition was modest and retiring and his heart was kind. He enjoyed the highest respect and esteem of all with whom he came in contact.

As a scientist Mr. Goss takes high rank. He was one of the foremost ornithologists of this country. He had a

magnificent collection of birds which at his death a short time ago he bequeathed to the state of Kansas. He had one of the finest collections of birds eggs outside the Smithsonian Institute.

From an article written by Mary E. Stewart, a personal friend of Mr. Goss, and printed in Yenowines' News three years ago, we copy the following interesting items concerning his scientific career:

"B. F. Goss was not more than 18 years old when he began a correspondence with the Smithsonian Institute, Agassiz and other scientists; which has been since continued, as occasion made it desirable. His brother, Col. N. S. Goss was not behind him in any respect. Mr. Goss was entitled to the distinction of Captain, but his modesty caused him to prefer being addressed as Mr. Goss.

Mr. Goss paid more particular attention to the eggs, nests and nesting habits of birds, and Col. N. S. Goss made the birds themselves his more special study. In pursuit of this study they have traveled—often together—nearly all over North America, including Mexico and parts of Cuba, besides. They worked with and for each other, and together have made such careful notes of their work as would furnish material for the most complete ornithology of North American birds extant. Mr. Goss, upon being asked why he did not publish it replied that at his age he did not wish to undertake so arduous a work, but would leave his notes for some younger man who may take sufficient interest to make such use of them. Mr. Goss at first collected for himself, but found such pleasure in it that he soon began collecting for others. I can remember well the delight I felt when a child on being shown a low chamber above the store, fitted up with branches of trees and sanded floor, and numbers of birds flying freely about and singing, or sitting on their nests which they had built where they pleased. Mr. Goss is very

genial, and will entertain one for hours delightfully in relating incidents and experiences in the course of his journeys for study. His anecdotes, collected would make an interesting book.

"Mr. Goss has his collection in a large pleasant room in his residence. He has given a duplicate to the Public Museum in Milwaukee. Besides his collection of eggs, Mr. Goss has many fine specimens of butterflies, moths and beetles. He began this collection for a daughter, an only child, of whom he has since been bereaved. He continues collecting, however, to fill up the time when he cannot be "birdnesting." His collection of eggs is now so complete that it is a rare pleasure to come across a new specimen. He has a large cabinet full of various specimens of interest and beauty, which he calls Mrs. Goss' collection."

A Day in the Woods.

BY DR. A. G. PRILL.

Having been very busy for some time during this Spring and consequently unable to study much the habits of our feathered songsters, it occurred to me that a day's outing, among the hills, would combine both recreation, and an excellent opportunity to secure a few sets of eggs.

It was on the afternoon of June 3rd that I decided upon spending the next day in such a manner and at once set about making the necessary arrangements. Before daylight on the following morning found me driving toward "Sweet Home," a distance of about 16 miles, arriving there at about 6 o'clock. I ate a hasty lunch and struck out for adjoining hills together with a friend. We soon entered a deep grove of firs and had proceeded only a short distance when the dog (which I have failed to mention before) flushed a Sooty Grouse and proceeding to the place we found a

fine set of seven eggs. The nest was a mere hollow in the ground lined with leaves at the roots of a clump of hazel bushes. This bird is a constant resident but is not often seen during the winter months, as it ascends high up in the fir trees, feeding upon the buds, and remaining there until about April 1st, when a person is aware of their presence again by the booming of the males. This continues along well into May. It is during this season that the Grouse are hunted much, being easily located, in a tree and then one accustomed to finding them, will have no difficulty in securing the bird. The birds do not descend to the ground until they cease booming, when they at once begin mating and proceed to nest.

After carefully taking our notes and blowing the eggs we again started forward and my friend soon flushed a Mountain Quail from her nest of 12 cream colored eggs. The bird fluttered along on the ground as if seriously injured, but being well aware of this peculiar habit of leading one astray from its nest, we did not follow it, but a few minutes search revealed its nest in a clump of dead ferns. This beautiful bird is also a constant resident and can be found at all seasons of the year. During a fall snow many are caught in traps, as they are easily decoyed with wheat.

Passing on again we soon entered a dense fir thicket in which we disturbed several Blue-fronted Jays, but as this was a late date for their nesting, we did not expect to find eggs and were very much surprised when on peering into a nest near the top of one of the firs to find four beautiful eggs. The nest was made of coarse dead fir twigs, loosely put together and lined with a few dry grasses and moss. This bird is exceedingly noisy, even as much as the Eastern Jay, and just as bold.

Three species of the Jay are found in this State, viz. Blue-fronted, Stellers and

Oregon Jay. The latter is not common. In my observation I have found it rare, having only seen four birds in three years. The two former both have crests, the latter has none and in coloring much approaches the Eastern Bird.

But I am wandering from my subject. Passing on we soon enter an opening and here we search diligently for a nest of the Ring Pheasant, but are disappointed. A male with a brood of young, perhaps ten days old is seen.

Coming next to a scrub oak grove, we search for nests of the Oregon Chickadee and are rewarded by finding two nests in dead stubs, only a few feet above the ground. One contained six, the other seven beautiful eggs of a white ground color spotted withumber and brown chiefly at the larger end. This bird is quite common, but its nest is so well concealed in the forests and briar patches that it is not as often found as might be expected. It had been a glorious morning, and we had been feasting upon Nature with all its beauty but it was approaching one o'clock, and the inner man began to feel the wants of refreshments. At this point we came to the Santiam River and seating ourselves in a shady nook we proceeded to eat our lunch, which by the way it disappeared, was very acceptable.

During this time, however, a pair of American Dippers were flying back and forth near the bank, and we proceeded to look for their nest. A short distance down from where we were sitting a log extended out over the water, and on the very end a ball of moss attracted our attention. My friend hastily scrambled out on the log but slipped and secured a ducking although the water was only about 2 feet deep. Not at all discouraged by this he waded out the balance of the way. But instead of four white eggs he found four young birds and they were not disturbed of course.

This bird is common along our moun-

tain streams but their nests are generally not often found, resembling so much only a bunch of moss and many times are built in inaccessible places. After gathering up our baskets, we started homeward, flushing several Quail but no more nest were found of this species. When nearly home we found a nest of the Red-shafted Flicker in a hollow stump some 40 feet high and seven pure white eggs were soon in my possession. Preparing these specimens we soon reached my friend's home.

After having a hearty dinner I started to drive home and reached there just at dusk and thus ended one of the most pleasant and profitable days of the season.

Bird Wit and Lack of It.

One of the chief attractions of the study of birds is the fact that they are not mere animated machines, living over and over, a certain routine of life, but on the contrary, to a certain extent at least, are thinking and reasoning beings, differing one from another in their personality and in the skill with which they adapt themselves to their environments.

To the new-comer from the East, one of the strange sights in this locality is the abundance and familiarity of the Blue Jay, and though like "Yorick" of old, in most of his actions, he may prove "a fellow of infinite wit," still in the choice of a nesting place he sometimes seems to be blessed with a plentiful lack of it. I remember the only nest of this species I ever found in New England. It was in a scrubby pine in the deepest recesses of a large tract of timber land, and was only discovered by catching a glimpse of the old bird as she silently stole away.

In this vicinity, where its experience with the white man, or rather boy, is measured by decades rather than centuries, it is much more confiding. A

pair nested last spring within 75 feet of my sitting room window, in plain sight while incubating, and close beside the street where there were constant passers by. I have found many of their nests here, and deem them fully as domesticated as the Robin, but I think its wits are getting sharpened, and in course of time it will be more like its eastern relatives.

Another species, that in my boyhood days was a great favorite, is the Baltimore Oriole, and many times I looked with longing eyes at its nest, almost invariably pendant from the extreme twigs of a drooping branch of some large elm, and about equally distant from the ground and the body of the tree, but I recall one exception to this rule.

An Oriole, it must have been the family dunce, or an extremely absent minded bird, built its nest attached to some twigs growing from the main trunk of a young apple tree, close to the house, and only six or seven feet from the ground; an easy step into the first crotch of the tree, and all the housekeeping arrangements were right under our eyes.

A full set of eggs were laid and their very innocence would have saved them, but in the absence of the family some roaming boys raided the orchard and carried off the eggs.

In this locality the favorite nesting place of this bird is the twigs near the top of some poplar or aspen; in many cases apparently easy to reach; but no one who knows the brittle nature of this wood will rashly venture far from the ground, so they are rarely molested, and their bird wit it would seem, has lead them to take advantage of the fact, as I have never found the nest in an oak or other tough wooded tree.

The Golden-winged Woodpecker is a bird that we would naturally suppose to be very conservative in its habits of house building, but I have in my col-

lection a set of their eggs taken from a shallow hole in a sand bank; but in its limited experience it had not mastered the laws of drainage, as have the King-fisher and Bank Swallow, so its tunnel sloped in the wrong direction, and the unfortunate miner was incubating some hopelessly addled eggs in a pool of slimy mud.

The story of the Chimney Swallow forsaking its hollow tree for the white man's chimney, is a "twice told tale," but there are some of this species, who are not satisfied with this advancement, and still aspire to something better. Some years ago, in entering a deserted and entirely unlighted barn in northern New Hampshire, my attention was attracted by the twittering of birds and opening the doors I discovered a nest of this species attached to the side of the barn near the roof, access to the building being gained through a crevice in the siding; although as dark as any chimney, the bird doubtless appreciated the ample room and still more the shelter from drenching rains and the disastrous results that so often follow to the tenants of a chimney.

A day or two after, on visiting a friend about four miles from this barn I was much interested to observe a further advancement in this line.

His barn, which was constantly in use, being a typical farmer's barn, was much in favor with birds, in the basement a pair of Pewees were occupying the same building site for the third year, upstairs some Barn Swallows were nesting on the tie beams, as they had for years, and against the end of the barn opposite the big doors, a pair of Chimney Swallows were located for the second year, their new nest being built close to the one of the previous year; here they nested in the full light of day, passing in and out the door along with the rest of their associates. When the young were large

enough, they left the nest, clinging to the upright boarding while their parents cared for them. The house was built around a huge, old fashioned chimney, and looking up from the fireplace the remains of old nests could be seen, but when the barn was occupied, the chimney was abandoned.

Unhappily, fire afterwards destroyed the barn, the owner himself perishing in the flames, and this movement for the amelioration of the condition of Chimney Swallows came to an end.

If time allowed I could cite various other incidents, but I think I have written enough to show the reason for the interest which many of us have in our feathered friends.

FRANK H. NUTTER,
Minneapolis, Minn.

August Contest.

Prize winners and credits received by each were as follows:

1. Nesting Habits of the Hades Plunger, 202.
2. Hash, 120.
3. The Long-crested Jay in Colorado, 101.
4. Nesting Habits of Scissor-tailed Flycatcher, 85.
5. Scenes from the Life of Alex Wilson, 79.

The article "Black Tern" was awarded one year's subscription to the Oölogist.

Below we name the winners of the Judges prizes and the order in which they named the winning articles in their decision. No one named them in correct order.

1. Herbert Sterzing, 91 San Jacinto St. Austin, Texas. 1, 2, 3, 5, 4.
2. A. O. Garrett, 1425 Ky St., Lawrence, Kans. 1, 2, 3, 5, 4.
3. Henry R. Buck, Wethersfield, Ct. 1, 2, 3, 5, 4.
4. Clark Ijams, 400 N. 7th St., Terre Haute, Ind. 1, 3, 2, 4, 5.
5. Edward Heller, 196 Rubidoux Ave., Riverside, Calif. 1, 3, 2, 4, 5.

The winners of first, second and third prizes all voted alike, also of fourth

and fifth prizes, hence they were awarded in order of priority.

The following parties having named the winning articles but not close enough to win other prizes were mailed a World's Fair almanac.

Arthur Lohman, Wis.
Ed Doolittle, Ohio.
I. H. Stratton, Ills.
Robt. McPherson, Mass.
A. W. Baylis, Iowa.
L. R. Kirk, Jr., Md.
Bert H. Douglas, Kansas.
C. Barlow, Calif.
Cyrus Crosby, New York
Edwin Warren, Jr., Calif.
J. S. Square, Ont., Canada.
David L. Savage, Iowa.
J. S. Grilling, New York.

AN ERROR occurred in the article in September Oölogist entitled "Cruising and Science," we giving the dimensions of the "moulds" as "thirty-six" inches when it should be "twenty-six" inches. Collectors building a canoe should observe this.

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NO. 11

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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STAMPS.—25 var. U. S. foreign stamps for ten varieties from one country. A specimen book (Aghiai) Fabell (Gray) for 50 varieties foreign stamps. FRED H. ANDREWS, Elgin, Douglas Co., Ore.

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MINE SOLD AT OFFICE.—My whole collection of eggs, about 50 varieties, valued at \$25., in sets with data, also a few singles, including Nos. 8, 18, 35, 38, 49, 52, 54, 57, 60, 35, 39, 39, 39, 39, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379,

A FERRET is wanted by WILLIE LABOR, 798 1st Ave., Lansingburg, N. Y.

WANTED.—A pair of strapped climbing irons in good condition. Will give in exchange first-class sets with data of Long-eared Owl 1-4, Cooper's Hawk 1-4 and Red-tail Hawk 1-3. All answered. WALTON MITCHELL, 534 Summit Ave., St. Paul, Minn.

WANTED.—To exchange 1st class sets of eggs with data of Southern Californian birds with collectors of other localities. E. A. SHIVER, 2424 4th St., San Diego, Calif.

FOR SALE—My collection of birds eggs, sets and singles, and shells (mostly land). Value about one hundred dollars (\$100.00), few duplicates. Those meaning business, enclose stamp for list. No exchange. FRED H. ANDRUS, Elton Douglas Co., Ore.

"D" Flute, Ger. Silver Trimmed. Cost \$8, for Coues' Key, Ridgway's Manual, or other book on Oology or cash, \$5.00. C. F. STONE, Branchport, N. Y.

FOR EVERY perfect Indian Bird Arrow Point sent me. I will send a well polished specimen of Orange Wood. MORSE HUME, Dearborn, Mich.

HAVE several lbs minerals and fossils also curiosities nests, few eggs, coins, etc., not sold yet. Will go cheap for cash. Clarinet in A. L. P. body type in good condition. R. M. DALRYMPLE, Baker, O.

CHOICE STAMPS to exchange for eggs in sets and singles. Will give good exchange for copy of Coues' Key, also cash for same. Send offers. F. McKay, Girard, Kan.

SAY YOU! Wait a Minute! Every one sending me \$1 I will send free by registered mail 1 Confederate stamp listed at \$3; or for 20c. I will send one listed at 50c. Old U. S. stamps for sale cheap. Agents send for my approved sheets 50 per cent. commission. I will pay cash for cancelled Columbian stamps. W. C. PICKENS, Livingston, Ala.

NOTICE.—I have two Emu eggs to trade, one for best offer in eggs, (singles) and the other for best offer in tree climbers. W. H. HILLER, 147 W. 23d St., Los Angeles, Calif.

WILL exchange a 3c. green playing card valued at 2.50 for best offer in eggs. SAMUEL BARLEU, Rising Sun, Md.

I HAVE a fine collection of strictly first-class sets for sale at two-fifths New Standard Catalogue prices. Parties meaning business write for lists. No attention paid to cards. L. J. DRENNAN, New Sharon, Iowa.

FOR EXCHANGE.—6 doz Monroe Ink Erasing Pencils, also 4 of the Large Columbian Watches, gold plated, value \$1.50 each, just the thing for collectors. Send list to pick from. CHARLES TUCKER, 84 St. Gregory St., Mt. Adams, Cincinnati, Ohio.

A selected nest and a set of two eggs, with full and original data of Black-chinned Hummingbird sent postpaid for \$.65. I have a few sets of $\frac{1}{2}$ " Arctic Terns left at \$.06 per egg. A set of each Roseate, Common and Arctic Terns for \$.38. The holes in these eggs are a trifle large and I have decided to close them out at cost. Five first class bird skins, no two alike, for \$.55. Everything postpaid. JAMES P. BABBITT, Taunton, Mass.

WANTED at once, 10,000 skins of the honest grade, called "trash" and "sweepings." This grade of skins are not fit for cabinets or collections, and collectors who have any on hand they would like to exchange for good, first-class specimens, please write stating how many you have. JAMES P. BABBITT, Taunton, Mass.

FOR SALE or EXCHANGE.—Large number mounted birds, first-class work, correspondence solicited. WM. MICHELFELDER, Taxidermist, Elizabeth, N. J.

WANTED.—Spear Head Tobacco Tags, will give good value for same in all kinds of Natural History specimens. A. MOWBRAY SEMPLE, Poynette, Wis.

DAVIE'S Nests and Eggs, paper, last edition; Birds of Minnesota, by Hatch; Lattin's Standard Catalogue, and various O. and O. papers to exchange for books on Ornithology. WM. H. FISHER, 14 W. North Ave., Baltimore, Md.

I HAVE a collection of California and Eastern eggs in sets with complete data amounting to \$12 catalogue prices, and singles worth \$11: a Coues' Key in fine condition and Davie's Nests and Eggs, cloth bound as good as new, in latest edition; also Taxidermist and Oological tools, nests, etc. Will sell for best offer in cash or a good revolver. Would sell books, collection of singles, etc. separately. All answered. No cards. WM. J. ROLFE, San Bernardino, Calif.

WANTED.—Spearhead Tobacco Tags in lots of 10 or more. Will give 1 oz. garnet sand, or 25 Periwinkles from Lake Erie for every 10 sent. A. R. OGDEN, Brocton, N. Y.

A BARGAIN.—Collection tube 38 cal. for 12 ga. gun, 100 brass shells, loader, wad cutter de-capper and 200 primers. As good as new. Will sell cheap. E. B. SCHRAGE, Pontiac, Mich.

WANTED.—Old Glory Cheroot certificates, will give foreign stamps, Chinese coins, and eggs, or will pay 10 cts. each for same. F. R. NOBLE, Nashville, Tenn.

WANTED. Orders for birds in the meat. During the winter months I can furnish many birds—20 kinds of ducks, hawks, owls, etc., etc., at very low rates. Send for price list. W. R. BROWN, Milton, Wis.

FOR SALE or EXCHANGE.—Vols. 1, 2, 3, 4 and 5 "The Ark" bound. Vols. 6 and 7 unbound. Vols. 1, 2 and 3 "Random Notes on Natural History." Vols. 1 YOUNG OÖLOGIST and 6, 7, 8, 9 and 10 to date OÖLOGIST; also the A. O. U. Code and Check list. HOWARD H. MCADAMS, Oak Bay, N. B.

FOR EXCHANGE. I have the following sets to exchange for sets not in my collection. Meadow-Lark 1-5, Black Vulture 1-2, Chachalaca 1-3, Yellow bellied Cuckoo 1-4 1-5, Cardinal 1-4, Red-winged Blackbird 1-4, Brown Thrasher 4, Mourning Dove 1-2, Catbird 1-3, Blue Grosbeak 1-3, Yellow Breasted Chat 1-4, Crow 1-4, Green Heron 1-4, Field Lark 1-4, English Sparrow 1-4. JAMES NEWELL JR., Carthage, Mo.

WANTED.—To exchange a collection of birds eggs value \$75. or more, between 200 and 300 varieties, about 600 in all, part are second class in that they are end blown. Also some rare U. S. stamps and Indian reliques, etc., Books, Papers and everything used by a taxidermist or oölogist. All for a good safety bicycle, gun, pistol, or will sell for cash. A great bargain. Address, ARTHUR DUGAN, First National Bank, West Point, Miss.

WANTED.—A collection of perfect Indian arrow heads, with proper data, from New England States, Upper or Lower Canada. State terms. L. P. WILLIAMS, Redlands, Cal.

NOTICE.—Persons having any U. S. Columbian postage stamps of the higher values to exchange for U. S. stamps, Indian relics, etc.; or to sell, should write to GUY JOHNSTON, Eagle Hotel, Grand Rapids, Mich.

I HAVE several founts of type, in good condition, and Century Magazine to exchange for eggs in sets. Shot Gun, Rifle, Davie's Key, etc. ROY CRIFFIELD, Atlanta, Ill.

ILLINOIS. I would like the names and address of all interested in Ornithology and Oology, who have not already had correspondence with me, located in the northwestern and the eastern south central of this State, also from near the above from adjacent States. W. E. LOUCKS, Peoria, Ills.

KODAK No. 2. I have a Kodak No. 2, new upon which the seal has never been broken and loaded with 60 exposures. Sole leather carrying case. Cost \$32.50. Will exchange for Sideboard of equal value, or sell for \$25.00 cash. MRS. FRANK H. LATTIN, Gaines, Orleans Co., N.Y.

NOTICE.—I have Ridgway's Manual, Ridgway's Nomenclature of Colors, Langille's Our Birds in Haunts, Davie's Nests and Eggs of N. A. Birds, Burrough's works, Miller's In Nesting Time, and other books on Ornithology for sale cheap for cash or exchange for books on Human Anatomy or Physiology. Make an offer. EDW. P. CARLTON, 1019 University Ave., Madison, Wis.

"**INSTITUTIONES REI HÄRBARÆ:**" 3 large vol.—leather—published in Paris in 1719. Vol. I contains 750 pages text. Vol. II and III, each contain about 250 pages of illustrations. Will exchange for \$10.00 with of standard books on Natural History (ornithology preferred) on back vols. of the Auk. FRANK H. LATTIN, Albion, N.Y.

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THE OÖLOGIST.

VOL. X.

ALBION, N. Y., NOV., 1893.

NO. 11

Some Notes on the Wild Turkey.

One of the greatest gifts which America has bestowed upon the world is the Turkey.

We are told that it was first taken from this country by a Spaniard who in the sixteenth century removed a few from Mexico to Spain. Afterwards it was imported into France and England. These magnificent birds were once distributed generally throughout Eastern and Central United States; but being such large and handsome game birds their forms have disappeared from many parts of our country. A good many years ago when this portion of North Carolina was new, Turkeys were abundant. But the single farms became settlements and settlements grew to towns, and then went on the country became more and more thickly peopled. As white men increased Turkeys decreased. Some years ago by a new stock law all cattle were obliged to be kept up instead of being allowed to run at large as they had hitherto done. This was the salvation of the Turkey, for a time at least. The old out-lying sage fields were no longer burned over to provide fresh pasture lands, and the long grass and underbrush that had been kept down by the cattle sprang up thickly, thus affording cover for the persecuted fowls. Their numbers in this section have since then increased. I have even shot at wild Turkeys in the Spring within sound of the college bell. An old hunter named Jessup with his two sons, living a few miles north of here, for the last four or five years killed forty or fifty Turkeys each season. One of the boys alone bagged over thirty last winter. They report, however, that each winter they are obliged to go

farther and hunt closer than was necessary the winter before. During the Christmas holidays of '91 three of the students and myself who remained over for the spring term, started off for a Turkey hunt. I was promised all the Turkeys that should be killed by the party for specimens. Our plan was to reach Jessup's about dark, get one of the boys to accompany us, push on four or five miles into the very heart of the Turkey country and camp for the night in the woods. Arriving at the old "Tar-heel's" house a little after dark, the old gentleman amuse us by telling of his war experiences, while Dan was busy loading his shells. After half an hour spent in relating thrilling adventures, he paused and sat looking into the fire thinking over again in his mind the battles of '63 and '64. One of the boys taking advantage of the silence said, "Mr. Jessup were you in the battle of Marathon?" "Well no," replied the old man, "I war in Lee's army and dat battle wer fought over in Virginia somewhar, I heared about hit at de time."—

Just at daybreak next morning Dan and myself parted company in the woods. I crossed a creek and went up on the hill according to his directions, while he went farther down. The other three men were posted back up the creek. Upon reaching the heavy growth of pines to which I had been directed, I threw myself down upon the pine needles, let my heels kick about in the air and munched the remnants of my last biscuit. Only a few minutes had elapsed when there was a sound of heavy clapping and three great birds sailed by, one alighting in a tree within ten yards of where I lay, the other two passed farther up the creek and likewise lit. Cautiously ris-

ing and taking rest on the side of a tree an ounce and a half of large shot was soon whizzing full at its breast. Rushing out from under the smoke with extended arms prepared to catch it as it fell I was somewhat surprised not to say shocked to see my bird flopping off over the tree tops and on up the creek after the others. Presently Dan came by and went on up the creek. In a few minutes his gun spoke and a little later he fired again. Before long he appeared carrying a fine Turkey hen by the neck. Upon approaching he remarked, "Gillie, here is a fine Turkey for you to stuff, 'taint hurt a bit for stuffin, I shot her in the head a purpose for you." The back of the head and skin for four inches down the neck was all shot away,—a nice specimen indeed.

It began drizzling rain soon and although Turkeys were seen twice after this, luck for the day was gone. The tail of that Turkey hen I still preserve as a memento of the trip. Last November, the day before Thanksgiving, Dan drove up in his spring wagon with a handsome pair of Turkeys. So all Thanksgiving day and for two succeeding days there were the sounds of nailng, filing, and other sounds which accompany the mounting of large birds. The measurements of the male were, as follows, length 47 inches, extended wings 62 inches, tail 17 inches, spurs 1 inch, weight twenty-four hours after being killed 16 pounds. The other was a young bird weighing only 8 pounds.

T. GILBERT PEARSON,
Guilford College, N. C.

Raptores of Michigan.

BY SCOLOPAX.

AMERICAN RORGIT-LEGGED HAWK. *Archibuteo lagopus sancti johannis* (Gmel.) This largest of our Hawks can never be considered as common in our state, and though all collectors of experience have

met with it, yet there are two or three published lists of Michigan birds which fail to embrace it. It has been known here since Sager's pioneer list was published in 1839, and has been recorded in nearly all the more recent catalogues of Michigan birds as well as by Dr. Miles, 1860.

Only one authority, Covert gives this Hawk as "very common in the fall," which is undoubtedly an error. I do not think the bird is ever common in our state. It is evidently a transient with us, appearing in February, March and into April on its way north, and undoubtedly passing to the extreme north, or at least into British territory to breed. Returning south it is more common in November, but is found in October and also in December.

My lamented friend Dr. Atkins reported finding a nest of this Hawk in Ingham Co., May 18, 1876 but the note is not reliable, the doctor having evidently erred in his identification. Ludwig Kummlein of Milton College, Wisconsin also reports finding two nests in Wisconsin.

It is fair to say that this Hawk does not nest in the Great Lake Region in the States, if at all, at least so rarely that nothing is known of its breeding habits in Michigan or adjacent states. Mr. R. MacFarlane took a set of two eggs June 9, 1864 on the Anderson River in Arctic America and everything indicates that the species nests at least north of the fiftieth parallel. •

Jerome Trombley records this Hawk as an occasional spring visitor to Monroe County in the south-eastern corner of the state. Later he says in direct contradiction, "Rare, and only in winter." A. H. Boies captured a specimen in Lenawee County, Nov. 5, 1879. In Kalamazoo County it has been taken as late as April 17th in the spring and on December 22d in the fall migrations. A large female specimen brought to me in the winter contained all the parts of

a full-sized red squirrel which had been but slightly mutilated. It has been recorded from Iron Mountain, U. P. Oct. 20, '92. S. E. White records the bird from Kent County and Macinac Island. We can safely say that this Hawk is quite generally distributed over our state both spring and fall; and it is equally fair to assert that it is very rarely or never seen within our boundaries in June, July and August. Collectors of Michigan know nothing of its eggs.

GOLDEN EAGLE. *Aquila chrysaetos* (Linn.). The earlier lists do not embrace this Eagle as a Michigan species.

Sager, 1839 and Miles 1850 both omit it in the Geological Report of the State. D. D. Hughes records the capture of two specimens. Many records have reached me which I feel unsafe in giving, for I am aware that the error is not rarely made of mistaking the immature (total brown) plumage of the Bald Eagle for the Golden. This is so common a mistake that I will mention a mark of identity so that your readers will not fall into the same error. In the Golden Eagle the tarsus, which is exposed in the Bald Eagle, is feathered to the toes.

This bird though a rare straggler from the North, has been taken often enough in various parts of the State, to the extreme Southern border, to convince us that it is quite well distributed in its wanderings. Butler in his 'Birds of Indiana' credits it as a "winter visitor" in that state.

One authority gives it the probability of nesting in our Upper Peninsula, which seems reasonable when we learn that this Eagle is known to be a resident in Maine, New Hampshire and Vermont. None of these states extend as far north as Michigan; however it must be borne in mind that there are many mountain sections in New England, whereas the Eagles who prefer

such a surface, are denied territory of this nature in the Peninsular State.

As soon as records can be regularly made in May and June it will be fair to consider the Golden Eagle a resident but as long as the captures range from November to March only we must doubt the propriety of recording it as breeding.

BALD EAGLE; WHITE-HEADED EAGLE. *Haliaeetus leucocephalus*, (Linn.). This majestic bird is comparatively well known to all veteran collectors and hunters, for although it is now generally a straggler, or, perhaps, we may say, migrant, or transient in Michigan south of the 43d parallel, still it is seen often enough, more particularly in the autumn, to be looked upon as a bird of even our southern boundary. I have heard so many stories about Eagle's nests within a few miles of this city that I do not feel like disputing the assertions; still all of the reported nesting sites which I have looked up have proven to be deserted. There is no doubt that the Bald-headed Eagle once reared its young about the lakes of the interior of the extreme southern part of the state as it is now found breeding at the north. Butler in his 'Birds of Indiana' says that this Eagle is still locally distributed in that state, and reports that it has been found nesting in six counties.

Young were taken in Ingham County Michigan and the birds raised to maturity by Professor W. K. Keckie of the Agricultural College. At the north the birds are well known and numerous instances of nesting are recorded. As an illustration of the variation in the nesting time of birds in different localities the following notes are offered. In March, 1891 two full grown young Bald Eagles were shown me in confinement on the Indian River, Florida. When we consider the time required to hatch the eggs and bring the nestlings to this advanced stage at least twelve to four

teen weeks, we may assert that the first egg was laid by December first. In late July of the same year I saw an equal sized pair of young Eagles which were but just removed from the nest on the Cheneaux Islands, Macinac Straits in the Great Lakes. These instances show difference of three to four months in the time of nesting between Northern Michigan and Middle Florida.

AMERICAN BARN OWL, *Strix pratincola* Bonaparte. This is a rare Michigan species and I cannot add any notes concerning it as I have never met with the bird. I am perfectly satisfied that a number of notes which have been given me by inaccurate observers, referred to some other species, more probably the Barred Owl.

A. H. Boies records it from Southern Michigan and says it is a resident. Covert mentions this Owl as "an accidental visitor." J. D. Allen shot one in Van Buren County. Chas. E. Bendire in the Smithsonian Contribution to Knowledge, Vol. xxviii p. 325 says this Owl is found at Sault Ste. Marie.

It is highly probable that the Barn Owl is only a straggler within our boundaries.

AMERICAN LONG-EARED OWL, *Asio wilsonianus* (Less.). This Owl can hardly ever be called common but is always to be found in certain sections in the right kind of land and woods. It was known as early as 1839 in our state when Dr. Sager recorded it in the Michigan Geological Report. Since then it has appeared in all State lists and in most local catalogues. It is a resident as are all of our Owls with three or four exceptions of winter visitors from the north and the straggler mentioned above. Some collectors claim that this Owl withdraws to the south in very cold weather.

A. E. Chambers of Kalamazoo found a nest near this city. The date was April 27, 1878, and the nest was situated about forty feet from the ground in

a tamarack in a low swampy section of land. It was built nearly at the top and where the body or trunk of the tree was not over three inches in diameter. The extreme top of the tree had been broken off and the limbs coming up at the sides gave support to the nest. The structure was composed of dead tamarack twigs of a size up to that of a lead pencil. It was a bulky affair and nearly or quite eighteen inches in diameter; external depth ten inches or more and internal depth six inches. The interior was softly and plentifully lined with feathers and the inside presented a marked contrast to the exterior in appearance.

The old bird could not be seen till she flew off which she failed to do until he was within a few feet of the nest. She kept near at hand for several minutes flew in short circles over the despoiler. After descending the female was secured but the male, who appeared on the scene, was too shy to be taken.

Six white, nearly spherical fresh eggs were found deposited on or in the bed of feathers, and as nicely provided with warm covering as is ever found. Another nest found May 22 of the same year contained five young ones about to leave the nest. This nest constructed like the other was situated in the top of an ash stub about twenty feet from the ground. We attempted to rear some of the young but failed although good success has attended our efforts with the Great-horned Owls.

These structures were evidently old Crow's nests which had been repaired and lined by the Owls, but I will not vouch for this peculiarity. Several writers speak of this habit and it is reasonable to admit of it when we consider odd choice of the Great-horned Owl.

The Long-eared Owl is found in swamps and low woods, and unlike the Screech Owl is never to my knowledge in upland oak woods. It is much more

THE OÖLOGIST.

common in suitable sections than is generally supposed, but as it is a nocturnal species it is rarely met with. In tamarack swamps and well removed from all habitations the Long-ear finds its food and makes its home, and in these situations the birds may live undisturbed for ages and remain unknown to all the inhabitants of the neighborhood; until at last comes the persistent egg-crane, who invades the swamp and brings in the birds and eggs.

This Owl has a very uncanny series of notes, which, when uttered in the depths of a forest, and in the solitude of a lonesome spot on a dark night are inclined to make a boy or man feel *skeery*. The song, for song I suppose it truly is, is terribly weird, and will make any person jump at first.

On one occasion I was tramping and collecting in the month of May and on finding myself a long distance from home resolved to camp in the woods as I had often done before. Selecting a protected position by the side of a log I built a fire and turned in with some dry leaves for a matress and the sky and foliage for a counterpane. With my gun at my side I was just falling into that pleasant state bordering on sleep when from almost exactly above my extemporized bed chamber came the most unearthly, devilish noise that I ever heard. You could not call it a shriek, yell, scream or any other sound which man can make, or which could be made by any creature of this world known to civilization.

My readers may think that they have been frightened some time in their lives, but it is to be doubted if they were ever as scared as I for a moment. My scalp solidified and straightened up "each particular hair" of my head until I know that my head looked like a brush-pile.

Of course my terror was all over in a couple of seconds after that nocturnal lover had finished his ditty, but for an

instant I think I was as badly scared as any boy ever was. I knew it was an owl, and I was sure it was harmless and I was not a coward by any means but catching me as it did, and before I had the power to realize, it scared me as badly or worse than a cougar's scream, a lion's roar, or the war whoop of a band of red-skins could have done.

With the Prairie Warbler.

By THEODORE W. RICHARDS, M. D.

Of the various birds breeding hereabouts which from an Oölogist's standpoint may be called "desirable" none can be found to better advantage than the Prairie Warbler. Arriving about the third week in April they soon become fairly common, and although many are but transients bound further north enough remain throughout the summer to make them the most numerous family, excepting of course the ever present Summer Warbler and perhaps the Black and White Creeper. But in spite of their numbers they are far from conspicuous for besides their shy and retiring ways they are decidedly local in distribution and are prone to monopolize certain chosen spots to the entire exclusion of many others apparently quite as desirable. And this is a trait, by the way, often noticeable in a less degree with many other birds not commonly regarded as sociable or inclined to colonize. I have no doubt this is largely a matter of food supply some places being more infested with their insect prey than others.

Once having located such a place during the breeding season the finding of the nests themselves is a matter of little difficulty to the ardent collector who has properly cultivated his "zoological eye," and I shall always remember with keenest pleasure my first experience in such a spot. A large hilly field had become overgrown with low, thick scrub-

by oak and hickory saplings with here and there a small pine shrub, the whole forming a perfect paradise for the Prairies, whose queer little wiry notes could constantly be heard. These notes are quite characteristic and easily recognized and are apt to be the only clue to the author's whereabouts, for *discolor* evidently has no wish to be "seen and not heard," but quite the reverse.

In their choice of nesting sites they again show little diversity, for with few exceptions the nests are built within five or six feet of the ground, usually in an upright crotch of three branches rather than two. One nest, the first found, was within one foot and a half of the ground. I may mention here, however, a case coming under my observation in north-eastern Pennsylvania which is quite exceptional so far as my experience runs, namely a nest of this species in the very tip top of a maple, at least *fifty feet* high. It was quite invisible from the ground and was only discovered by chance during an unsuccessful prey upon a pair of Hummers, whose bunch of bichen, alas, was unsatisfactory by anything short of wings.

Although in the locality referred to above most of our specimens were taken in the hardwood saplings, a large proportion of the scattering pines also yield nests.

While as has been mentioned, the *T. s.* are usually shy and retiring, they are less so enough when the nest is obviously disturbed and once on a clear moonlight night site, they do not fly with great alarm, nor perchance do I partly disturbed them in the dark, do they do the same. In such cases, however, they are not to be seen again.

ing them from those of the Summer Yellow Bird, which also nested abundantly.

The number of eggs was four except two sets of three, no nest holding five though according to most collectors this is not uncommon.

As last season I had no opportunity to visit my Prairies, next year I will pay them special attention to atone for my apparent neglect.

Migration.

The so called migratory instinct in birds has occasioned much speculation among thoughtful persons. A great deal has been written on this subject, but the basis of truth, I believe, has not, as yet, been satisfactorily reached. It is a remarkable and a well established fact that certain birds journey from one locality to another at particular seasons of the year and also that a periodicity of motion is observed. In fact, custom has made this periodical return of the birds of passage to their old haunts so certain that ornithologists are able to forecast, within a few days, the time such and such birds are to arrive. Further that the motion of many of the migratory birds is augmented or retarded, according to circumstances, by meteorological changes, has been substantially corroborated. That knowledge and reason are used by the birds during their migrations is very evident, but it has been found necessary, as a rule, to revert to instinct to account for the fundamental impetus which governs their seasonal movement.

When we observe or learn of the movements of the Bald Eagle, the Osprey or any of the other large birds which habitually frequent the sea-coast or large water courses we do not wonder then they are able to winter in a semi-tropical climate and to return to their old breeding places in the spring. These birds easily follow the sea-

coast in the east and west, and the great river and its tributaries in the Mississippi valley. But when instances come to our notice that the minute hummers have been known to return to the same tree after wintering in the far south we cannot do otherwise than to marvel thereat.

Then we recall to mind the story that is told of a stork that was captured on or near its nest in Germany. The captor put a copper band bearing date, town and country on the bird's leg and then the prisoner was liberated. This was a strange thing to do but it was productive of a wonderful result. The next spring a stork returned to the same German breeding place and the captor of the previous year caught the newly arrived bird. The captor was much surprised to note that the new comer bore two copper bands on one leg. The first was the ring put on the year before, and it showed that the intelligent bird had returned to his old home. The second band told where the stork had been. An inscription on the ring read as follows "India sends greeting to Germany." This evidenced the fact that the bird had been subjected to the indignity of capture in his Indian home, and there burdened with a second band. The first, no doubt, instigated the putting on of the second.

Many wonderful episodes of bird life, bearing on migration, are mentioned but space forbids.

Now as to the primary cause of the impulse which starts the birds on their change of abode, we may say that what there is no question about is that by them that go there is no return, and it must be so because they are a very delicate species, and indeed are part of the animal kingdom. The birds, especially the songsters, have no harbor of safety in the winter. Odd species, however, remain with them throughout the winter, and most of

To advance my theory regarding the aforementioned reason and knowledge as displayed by the migratory birds, I will say that they know that their heat and light are delivered from the sun; they know that when the solar orb apparently sinks below the western horizon that the light is soon superseded by darkness and that a lower temperature is to prevail; they know that when the sun again appears daylight and warmth returns. When after the summer solstice the great master of our system seems to recede, the fact is noticed by them, and when the nights get too cold in the autumn the migratory birds move towards the apparently retrograding orb until a zone of warmth sufficient to satiate their bodily needs is reached. Of course, the sun all of the time appears to move from east to west but the birds know that his path across the sky lies to the south, and so they intelligently journey in that direction. A great deal of migrating is done by night when the sun is absent and the birds cannot then use him for their guide, but we will assume that they are able to maintain the general direction of the great autumnal migration even if their shining light does divide his time with them and their antipodal congeners.

In the spring when the sun seems to be moving north, the birds on passage, certainly, become more apt for the long day, move away from the equator, and in comes congenial. To the north, however, there are repeated changes of climate, and the birds are compelled to return to the south again.

It is evident that the birds are not guided by the sun, but by the stars, and the

stars are not always visible at night.

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An abundance of some particular food often detains certain birds in the locality where it occurs, but in general the movements of the feathered tribe are influenced by heat and cold, and I think facts will support my theory that the sun is the guide of the migratory birds in the great spring and autumn movements.

The ingress of cold air with a wind from the north, and the influx of warm currents with southern breezes may teach the birds something, also change of foliage, and old experienced birds may assist their younger companions in migrating, but these are but minor influences, in comparison with that potent force exerted by our great central luminary.

Sharp-shinned Hawk.

Of the sworn enemies to the farmer, among this class of birds one of the most prominent is the Sharp-shinned Hawk (*Accipiter velox*). Its distribution may be said to generally correspond to that of its victim, the farmer, and in spite of all the persecution he endeavors to heap upon it the little Hawk continues to prosper and multiply, and is found distributed all over the United States, the British provinces, and is said to have even reached the icy regions of the Arctic circle.

The food of the Sharp-shinned Hawk consists mainly of small birds which it devours in large numbers, including the English Sparrow, certainly a redeeming trait for the Hawk.

This Hawk begins to nest in this locality about the middle of May, generally selecting as a building site some one of our coniferous trees, such as hemlock or cedar. It has also been claimed that this species will occasionally nidificate on rocks and in the cavities of trees.

The first set of eggs of the Sharp-shinned Hawk that I ever obtained was

during the season of 1889 in Chester county, Pa. A friend and myself had long searched for a set of eggs of this bird but our efforts had always been in vain, until one day I was able to announce to him that I had found a pair of Sharp-shinned Hawks building, he declared that I was mistaken "it was some other bird," he said "probably a Cooper's Hawk." However, I paid occasional visits to the locality, watched the birds and on May 23d, my friend accompanying me went to the place, locally known as Cedar Woods, and obtained a fine set of four eggs of the Sharp-shinned Hawk. The nest was placed in a cedar tree, about twenty feet up, and composed entirely of small twigs, with a slight depression on the top to receive the eggs.

Some writers assert that leaves, grass, moss, etc., enter into the composition of the nest but such was not the case in this one I found. Nests that I have since seen were built in the manner of the one above.

The Sharp-shinned Hawk is quite plentiful in Pennsylvania but can hardly be called common as a breeding bird, at least it is not so in this portion of the State.

I know of but three other sets having been taken in Chester county, two sets of five eggs each by Dr. Warren, State Ornithologist, and one set of three eggs by Mr. Thos. H. Jackson of West Chester. W. E. ROTZELL, M. D.
Narberth, Pa.

A Nest (Plum) Full.

June 11, '92.—Collected four eggs of American Goldfinch from nest in fork of plum tree. As I did not think the set was complete I substituted small green plums for the eggs taken.

June 13th.—Collected another egg from Goldfinch nest making a set of five.

FRED H. ANDRUS,
Elkton, Ore.

THE OÖLOGIST,

A Monthly Magazine Devoted to

OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.

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FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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We would call the attention of our friends to the ad. of Mr. P. G. March in this issue. We recently received specimens of his Photos and can recommend them as excellent.

Bluebirds of California.

The Bluebirds are represented in California by two species, *Sialia mexicana* and *S. arctica*; the latter of which is

rather the scarcer. In this, the southern part of the State, they both nest in the mountains, but during the winter they come down into the village. Here they generally frequent the orchards and vineyards, especially the vineyards, but very seldom if ever do they, as eastern birds, come around human habitation. The time of their migration seems to be governed by the weather of the mountains, for soon after the first snow in the moutains, they, with the Robins, are to be found in the village.

ROBERT E. SNODGRASS,
Ontario, Cal.

The Texas Sea-side Finch.

April 19, 1892 found me in a large salt marsh looking for Sparrow nests. After a two mile tramp one nest was found, containing four fresh eggs. The ground color is white showing the faintest tinge of green; the markings are small dots sprinkled over the entire egg, mostly, however, at the larger end, of a reddish-brown color. The nest was loosely made of dead grass, lined with finer, and was very neatly worked in the heart of a tussock of salt grass, 11 inches above the water, which was four inches deep. Externally the nest measured 4½ inches in diameter by 3 inches high; walls 1½ inches thick; bottom 1¼ inches thick. Inside measured 2 inches diameter by 1½ inches deep.

Very often the high spring tides wash the nest away, but nothing daunted the birds build a new nest, weaving it in the tops of rank grass or rushes, and if in the latter, using the leaves to done the nest, or rather make a rainproof roof for it. When placed in this position the nests are hard to find, as they are woven of green grass in the shape of a ball, with the entrance on one side near the top. As a general thing they prefer thick grass growing on edge of a small bayou. W. E. GROVES
Galveston, Texas

**Shore Birds at Lake Roland and Loch Raven,
Baltimore Co., Md.**

Lake Roland, one of our Reservoirs, is situated seven miles from Baltimore, on the line of the Northern Central railroad. The elevation of water surface is 225 feet above tide water and at high water level it covers an area of 116 acres.

It is supplied by seven streams, varying in size from one of only a few inches in width to one of about twenty feet wide.

It is well stocked with Black Bass and Carp, but they get so much natural food that it is slow sport fishing for them.

The long drouth in August and September of the present year (1893) made the water reach a low level of 12 ft. 9 in. below its normal depth, and laid bare a large expanse of mud flats about the upper end. These have been covered all summer by Shore birds of various kinds.

Another of our Reservoirs is Loch Raven, which is about 11½ miles from Baltimore and is an enlargement of the Gunpowder Falls, formed by damming it up.

The following are some of the birds noted at the two lakes from time to time, between August 19th to September 4th.

Pelargopsis poliocephala.. Pied-billed Grebe.—Three small Grebes were seen about 200 yards out on the lake and I took them to be of this kind.

Sturnus vulgaris.. Least Tern.—Several times while watching the birds I saw a pair of these little Terns at Lake Roland. They spent most of the time flying over the water, dots of white feathers in the "blue" sky. They alighted on the water and swam about, the pair together, now and again alighting on the mud flats, then swimming off again. They were seen at Loch Raven, also, in the same manner.

scattering them as if they had seen a Hawk.

Anas obscurus.. Black Duck.—A young female of this species was shot at the head of Lake Roland, August 28th.

Ardea herodias.. Great Blue Heron.—Almost the whole summer a Great Blue Heron remained about Lake Roland, and once I saw a pair of them. They were generally absent from about 10 a. m. till 3 p. m., when they would put in their appearance and go to fishing along the edge of the mud. On several occasions I also saw one at Loch Raven.

Ardea rirescens.. Green Heron.—One or two could always be seen about Lake Roland, and I found them much more plentiful at Loch Raven.

Nycticorax nycticorax norius.. Black-crowned Night Heron.—August 19th in walking through the woods near Lake Roland I flushed a pair from the trees. I think several pairs of these birds nested in the vicinity of the lake although I was unable to find the place.

Tringa minutilla.. Least Sandpiper.—On several occasions I saw about twenty-five of these little fellows feeding with a flock of larger birds of various kinds.

Eroletes pusillus.. Semipalmated Sandpiper.—On August 19th there were only seven of these birds at Lake Roland, as far as I could ascertain. On the 20th there must have been between 200 and 300, then they gradually disappeared until on September 4th there were only about twenty to be seen. On August 20th I saw ten at Loch Raven and shot one.

Totanus melanoleucus.. Greater Yellowlegs.—The only record I have was a single one seen at Loch Raven August 19th. It was very wild and I was unable to get near it.

Totanus flavipes.. Yellowlegs.—August 19th I saw a dozen feeding on mud flats at the upper end of Lake Roland. While I was watching them one over-

head whistled and on being answered by the others it joined them on the mud. These were by far the tamest and most unsuspecting of all the birds seen about the two lakes. August 29th saw a flock out on the flats. September 4th there was only one to be seen.

Totanus solitarius. Solitary Sandpiper. Quite plentiful at both lakes. From twenty to thirty could be seen at almost any time.

Bartramia longicauda. Bartramian Sandpiper.—Although these were not seen with the other birds on the flats, I mention them as they could always be seen sparingly in the pasture fields about Loch Raven.

Actites macularia. Spotted Sandpiper.—These birds were very scarce about the lakes; they were more plentiful along the banks of the streams.

Aegialites vocifera. Killdeer.—Very plentiful about both lakes, but especially Lake Roland, where there was a much larger range of mud flats. On August 19th while sitting on the bank, I counted fifty-two in sight at one time on a piece of mud about three acres in extent.

Aegialitis semipalmata. Semipalmented Plover.—August 29th I saw about a dozen of these little "Ring-necks" feeding on the flats with the other birds.

Pandion halictus carolinensis. American Osprey.—On several occasions I saw a pair about Loch Raven.

Ceryle alcyon. Belted Kingfisher.—A few seen about both lakes.

Wm H. Fisher,
Baltimore, Md.

The Game Bird of the Year.

The birds of this year are to be selected from the two lakes. The reason of this is that the species we find here are the western forms.

this central section has a few birds peculiar to itself. Prominent among these is the Prairie Hen.

In this article I shall not use scientific terms but shall confine myself to homely expressions and comparisons, I think I can give a better general idea of my subject in this way than any other. No doubt a large number of the readers of the "Oölogist" are scientists and perfectly familiar with Latin terms and technical phrases. Yet it is reasonable to suppose that many of the readers are more familiar with our birds themselves than with ornithology as a science.

Have you ever heard that peculiar sound called the "booming" of Prairie Chickens; probably not. In order to hear it you must be in the country and get up before sunrise some morning about the first of May, this is the mating season. The birds congregate in flocks of forty or fifty birds each and seek some grassy ridge somewhat apart from man, to do their love making. The long drawn booming sound is made by the males. They have quite a bellows of loose skin on the neck which they puff up, and tufts of feathers on the back of the head or neck. They erect these "horns," lower the wings slightly spread the tail and strut about somewhat in the manner of a Turkey Gobbler,—giving words to their lovesong, while the females keep time with their *ta ta ta ta ta ta*. A friend of mine, an old Englishman, once told me that the males were always trying to say "I am your mate" and that their wives were always trying to say "To you I am your mate." I don't know if this is true or not, but it is a good story.

Now, the Prairie Hen is the bird that

booms, and the Prairie Hen is the bird

that is to be selected as the game bird

of the year. The Prairie Hen is the

bird that is to be selected as the game

bird of the year. The Prairie Hen is

as large as small chickens. The heads are small, the beaks and feet nearly black, the plumage is dark and colored somewhat like that of the common quail. That is the feathers are barred with dark brown and light brown, with here and there a yellowish tint. The wings are small for such a heavy bird, but they make up for that by rapidity of motion. If you strip off the feathers the skin is found to be decidedly dark. In this case, color is more than skin deep for the flesh is extremely dark, even after being cooked. Despite the color, Prairie Chicken is of an excellent flavor, especially if the bird is young and "cooked just right."

During the winter, they congregate in great flocks. A single flock often contains several hundred birds. When spring comes, they separate, each pair seeking a home in some unfrequented place. There the nest is built on the ground, hidden by grass so that it is extremely hard to find. In "early times," prairie fires were very destructive to the nests and young. After a fire it was no uncommon thing to see whole sets of scorched eggs on the bare ground.

The number of eggs in a set varies from a dozen to over twenty: They have the general appearance of common barn-yard guineas eggs. The color being nearly the same as that which coffee gives eggshell, although they are sometimes dotted with dark brown. The shell is much heavier and harder than that of hens eggs.

If you should succeed in finding a brood of young about a week old, you would be surprised at the activity they display. It is very difficult to catch one of these lively youngsters. The mother gives a warning cry—away they scurry in all directions, giving a peculiar weeping cry. In less time than it takes to tell it, they have vanished, and search as you may, the chances are that you cannot find a single one.

Judging from my experience with a

shot gun, the "bow armed Indian" did not bag many chickens. The modern "sport" with his well trained dog and his repeating shot gun is hurrying this noble bird to the happy hunting ground. It is not the hunting clubs nor is it the farmer with his muzzle loader, who is waging this war of destruction, but it is the worthless town loafer—that miserable wretch who is too lazy to work for his living but supports (?) his family by fishing and pot-hunting. It is this same fellow or others of his caliber who in many places hunt birds for their feathers.

To make this business more despicable it is generally carried on in defiance of the law. If this slaughter continues, the Prairie Hen will soon be numbered with the rare birds.

This "sport" continues until nearly all the chickens are killed. The few "lucky birds" are very shy and lead lonely lives until Christmas time, when they again collect in flocks.

They are seldom hunted in winter because they fly long before the hunter comes in range. Yet they may often be seen feeding in cornfields or on the buds of trees. They seem to have a special liking for cottonwood buds and it is no uncommon thing to see twenty-five or thirty birds in one tree, in the spring time. Do not mistake my meaning and get the impression that Prairie Hens "live in trees," for they spend nearly all their time on the ground or flying.

. With a short description of the flight of the game bird of the prairie I will close. It may be called a "buzz and a roar." It is accompanied by a loud whirring noise, unlike that produced by any other bird that I have ever seen. Like Bill Nyes Ostrich they have a lively way of swapping time for distance.

X. T. C.

Sora and Virginia Rails.

SORA RAIL. A glance at the map of Minnesota will find many of its counties completely dotted with lakes and one would naturally and rightly expect it to be the home of an abundance of water birds.

Of all those which breed in Hennepin County, in which Minneapolis is located, the Sora Rail is perhaps the most abundant.

One cannot journey very far along a road without coming across one of those little ponds so common to our landscape with its borders of wild rice or flags and wet meadows surrounding it. In these the bird in question makes its summer home and though perhaps the ordinary passers are all unaware that such a bird exists, the ornithologist tramping through the grass or searching among the flags will have no difficulty in flushing one occasionally.

The Rail may be considered a semi-nocturnal bird. He keeps hidden away in the grass during the broad day but as soon as evening approaches he comes forth from his retreats and at twilight you may find him in his fullest activity moving about on the lily pads or floating vegetation on the borders of these ponds.

They do not find the least difficulty in obtaining support, however light the material on which they place themselves, a floating flag or a rice stem will give an ample foundation and when it is necessary to cross the clear water they will either raise themselves in short flight or lower themselves and swim as does a Coot or Gallinule. The tail, what little there is of it, is carried erect when walking and I have seen one in breeding time with his tail full spread strutting about after the manner of a Turkey gobbler.

Their arrival is always associated in my mind with that of the Yellow-headed Blackbird and the Coot, which in

this locality is a little before the first of May.

The nesting begins as early as the middle of May and continues into the middle of July.

Fresh eggs can be found here about the first of June more commonly than at other periods.

I have found the nests situated in the long grass of the meadows, in the flags and cattails of the swamps and more commonly in the matted tussocks of wild rice stocks where there is an entanglement of old and new growths. The nest is formed of grasses or weeds, it is not very deep inside and has a large diameter considering the size of the bird. It is placed all the way from close proximity to the surface to a foot and half above it. Ten eggs may be called an average set though they vary considerably about this number.

When the summer draws to a close the birds do not confine themselves so much to their hidden retreats of the breeding season but take to the more open rice bordered streams and lakes. There on account of the thinness of the wild rice they may be found at all hours though, as I have said before, they are more active at twilight.

The young are grown and their numbers are swelled so that they are much more noticeable at this period than in the spring.

During the present season they were much more abundant than they have been for four or five years past; it may be on account of the lack of heavy spring rains this year which so often raise the water over the meadows just at the breeding season.

I visited a large lake some miles distant from Minneapolis early this fall, for the purpose of hunting ducks. Hundreds of Rails had gathered in the growth of wild rice that was scattered from one end of the lake to the other. Every shot from my gun awakened such a series of piping notes that it was

hardly possible to distinguish the separate cries. Even the piping of a single bird would awaken the others into giving vent to their cries, so that the lake resounded from shore to shore.

At nightfall, as I lay with my boat well concealed in a tussock, waiting for the passage of ducks, the rails seemed to be very curious about my presence there. Several would silently gather around me on all sides, sometimes coming in dangerous proximity to the boat, and upon my rising suddenly, they would all scurry off with marvelous swiftness, literally running on the water.

On account of the larger game not much attention is paid to them here, however they are much hunted by boys along the creeks near the city, and are familiarly styled "Water Rails."

They remain about these marshes and streams until the first or second week in October when they leave for a warmer climate.

Audubon says, "they travel silently and by night, and in a direct course, at a height of only a few feet over our broad rivers or over level land when their speed is such as is never manifested by them under ordinary conditions."

VIRGINIA RAIL. The Virginia Rail is not nearly so abundant here as the Sora. Their habits are in general similar, otherwise than the fact that the former are of rare occurrence on the streams here in the autumn. They either migrate early or keep to their retreats of the summer.

The nests of both birds are often built in the same places and are of similar structure, though I have found nests of the Virginia on the borders of meadows some distance back from the water. One in particular was located on the edge of what had been a pond a few weeks earlier in the spring, but was then completely dry and the nearest water was at least a quarter of a mile away. It was simply a hollow in

a hummock of earth, lined with a few grasses and well arched over.

The complement of eggs is about the same as that of the Sora and should not be confounded with them as they are different both in the shade of the background and in the color of the markings.

Unlike the Sora Rail the bird in question makes its presence known by an occasional cry when one is intruding near the nest and though she keeps well hidden in the grass, she remains in the vicinity of her eggs.

H. M. GUILFORD,
Minneapolis, Minn.

Unusual Nesting of the Sparrow Hawk.

In the earlier part of May, I saw a Sparrow Hawk leave a hole in one of the banks of a small creek, near Redlands and on reaching it, I found it to contain a set of four incubated eggs which I took. The hole was about 15 feet from the ground and was 12 inches in depth and contained no nest at all except some sand scraped from the side of the hole. During May I took another set (4) from the same hole, which however had been dug deeper and a few feathers placed therein. I also took a set of three from another hole near the above mentioned and from which I took a set of Red-shafted Flicker's earlier in the season.

L. P. WILLIAMS,
Redlands, Calif.

Notes from Maine.

June 5, 1893, I took a set of 4 American Ravens' eggs on No Man's Land near Matinicus, Me. The eggs were all rotten but the bird was still covering them. The fishermen said that there had been a nest on the same island for several years but that the birds didn't seem to increase.

During the first week in July I saw

several flocks of Pine Siskins—from 100 to 200 birds in a flock—in Houlton village. They were nearly as tame as English Sparrows.

The Scarlet Tanager is evidently on the increase in the northern tier of the New England states. I saw one this month (July) as far north as Oakfield. In the same town Rose-breasted Grosbeaks are common. We found one of the latter perched on a picture in the dining room of the hotel. The bird was caught in the barn about six weeks before. It never manifested any disposition to leave the house, although the windows and doors were often open. It sang brilliantly until it began to moult. Ten years ago the Rose-breasted Grosbeak was rare in Maine; but it has been steadily increasing, until now it is to be found breeding in nearly every section. Many of us hope that the Scarlet Tanager will continue to increase until it is as common as the Grosbeak.

A. B. C.
Old Orchard, Me.

Oven Birds Nest Building.

One morning while out eggling I had the pleasure of watching a pair of Oven Birds building their nest, and the system and order of their united labor was very interesting.

The female kept inside, arranging the material and shaping the nest to fit her own body, while the male industriously worked on the outside bringing and placing the material, and by their united systematic labor the oven shaped nest progressed with surprising rapidity. One rootlet which Mr. O. B. was pulling vigorously upon snapped suddenly giving him a double somersault backwards before he could regain his equilibrium; but the plucky little fellow hung on to his root. The next day I found the nest complete and one fresh egg. I was so much interest-

ed in this pair of birds that I allowed them to hatch their eggs and rear their young undisturbed.

M. D. COOPER,
Antrim, N. H.

The Bob-white.

This beautiful game bird is very abundant in this locality, and is increasing in numbers every year. They mate in April, and in the early morning and in fact, all through the day, you can hear the love call of the male. They nest all through the summer months, but I do not think they raise but one brood. They lay from 12 to 21 eggs. I found four nests last season. One contained 24 eggs, one 18, one 15 and the other 12. The ones that contained 21, 18 and 12 were perfectly fresh, but the one that contained 15 was slightly incubated. The nests are extremely hard to find, and can only be found by mere chance or by flushing the old bird.

H. L. HEATON,
Oberlin, Kan.

The Whip-poor-will in Stark County, Illinois.

I have often seen and heard the Whip-poor-will in this locality but until last year have been unable to secure any eggs. On June 9, 1892 two friend secured a nice set of two eggs of which I secured one, and also a description of the nest and bird. On the 18th of June I found a set of 2 eggs, probably laid by the same bird as the set on the 9th, the eggs were placed on the ground in a small brush heap, there being no nest except a slight hollow filled with leaves. The female was on the nest and did not fly until I was within a few feet of her. Is this not rather far north for the Whip-poor-will?

By V. C. Knobbs

\$300.00 WORTH OF PRIZES

Will be Presented during 1893 to
The Patrons (Contributors and Readers) of
THE OÖLOGIST.

Each month during 1893 we shall give five prizes. These prizes are to be awarded to the five best articles appearing in each month's OÖLOGIST.

The prizes throughout the year will remain the same, except the first one which will be the winner's choice from the unawarded articles and publications named in the following list:

Coues' "Key to North American Birds".....	\$7.50
Ridgway's "Manual of North American Birds".....	7.50
Chamberlain's "Nuttal's Ornithology" (2 vols.).....	8.00
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Maynard's "Birds of Eastern North America" (text complete). .	15.00
Washington Irving's Works, 10 vols.....	7.50
Wm. M. Thackeray's Works, 10 vols.....	10.00
Chas. Dickens' Works, 15 vols... .	11.25
Jenk's "Comprehensive Commentary of the Holy Bible." 5 large 900 paged Volumes..	25.00
Sir Walter Scott's Works, 12 vols	12.00
\$10 worth of Phonographic Books and Publications.....	10.00
An 8-qt. Jack Frost Ice Cream Freezer.....	6.50
A Due-Bill good for \$31.50 towards a new \$46.50 Marlin Repeating Rifle.....	31.50
A Due-Bill good for \$33.00 towards a new \$45.00 American Union (same as New Home) Sewing Machine.....	33.00
A Due-Bill good for \$12.00 towards a new \$20 double case Odell Type writer.....	12.00
2nd Prize each month will be a part of "Maynard's Birds of Eastern North America," each containing an average of 8 plates and 340 pages strongly bound in strong manilla and cloth and worth at publisher's original price not far from \$7.50	
3d Prize—Langille's "Our Birds in Their Haunts", \$3.00	
4th Prize—Brewer's "North American Oölogy" unbound, no plates, original price about \$3.00.	
5th Prize—Baird's Review of American Birds" originally sold at \$2.00.	

Each article receiving at least as many credits as there are number of Judges and not winning one of the leading prizes will be awarded the OÖLOGIST for 1893 bound in cloth and gilt.

Each article receiving at least one-half as many credits as the number of Judges and not winning any other prize will be awarded a year's subscription to the OÖLOGIST.

All MSS. prizes are sent by mail or express prepaid, *except* the first, which is shipped at winner's expense.

You are a Judge.

You have been selected to act as one of the Judges in this month's Prize article contest, and your decision must be promptly and fairly given.

Your decision must be mailed us not later than the twentieth of December. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five special prizes, one to each of the five whose decisions are nearest the final award of prizes and in this month's competition the Judge whose list of five articles is the nearest the awarded list, we will give a part of Maynard's "Birds of Eastern North America", each of these parts contain an average, of 2 plates and 264 pages, strongly bound in heavy manilla covers and at publisher's original price are worth *at least* \$5.00.

2d A handsomely bound book "Small Talk about Business."

3d A Combination Microscope.

4th An Agate Watch Charm.

5th A Pocket Knife.

To each Judge naming the five prize-winning articles in their exact order and not winning one of the five special prizes we will give a copy of the "Standard Catalogue of North America Birds Eggs."

To each Judge naming the prize-winning articles but not in their exact order and not winning one of the five special prizes we will give a copy of that elegant new Columbus or World's Fair Almanac, (value 25 cts.).

All Judges' prizes are sent by mail prepaid.

Address your decision to

F. H. LATTIN & CO.,
Albion, N. Y.

SEPTEMBER CONTEST.**Thirty-eight Judges.**

Prize winners and credits received by each were as follows:

1. The White-tailed Kite and Prairie Falcon in California. 156.
2. The Sap-sucker. 119.
3. The American and Least Bitterns in Henry County, Ills. 101.
4. Cruising and Science. 95.
5. Scenes from the Life of Alexander Wilson. 51.

The Judges' prizes were awarded as follows:

- 1.—No. 31. Fred McAllister, Davison, Mich. 1, 2, 4, 3, 5.
- 2.—No. 8. Millard Van Wagner, Gretna, N. Y. 1, 4, 2, 3, 5.
- 3.—No. 9. N. G. VanWagner, Gretna, N. Y. 1, 4, 3, 2, 5.
- 4.—No. 35 F. A. Gregory, Rockford, Ills. 1, 2, 4, 5, 3.
- 5.—No. 19. Howard H. McAdam, Oak Bay, N. B. 2, 3, 1, 4, 5.

The following Judges were awarded World's Fair Almanacs.

1. C. Will Beebe, N. J.
15. Wm. A. Achilles, Tex.
20. C. B. Johnson, Minn.
23. Hubert Fuller, D. C.
25. James M. Odell, Jr., Tex.
28. Chas. Meyers, Ohio.
30. H. L. Heaton, Kan.
32. A. W. Baylis, Ia.
38. Bert H. Onglars, Kan.

All prizes were mailed on Nov. 25th.

OCTOBER CONTEST.**Thirty Judges.**

Prize winners and credits received by each were as follows:

1. Raptoreo of Michigan. 135.
2. The American Woodcock. 103.
3. Scenes from the Life of Alexander Wilson. 54.

4. Auld Lang Syne. 45.

5. { A Day in the Woods. 29.
{ Bird Wit and Lack of It. 29.

The Judges' prizes were awarded as follows:

1. Arthur Lohman, Two Rivers, Wis. *Exact.*
2. R. P. Gillespie, Columbus, Miss. *Exact.*
3. Everett Johnson, Lewiston, Me. 1, 2, 4, 5, 3.
4. Clarence Luther, Fayetteville, Ark. 1, 2, 5, 3, 4.
5. A. W. Baylis, Cedar Rapids, Ia. 1, 4, 3, 2, 5.

The following were awarded World's Fair Almanacs.

Robt. McPherson, Mass.

Chas. Meyers, Ohio.

Fred Parkhurst, N. Y.

Clayton Barnard, Ind.

Edmund Heller, Calif.

All prizes were mailed on Nov. 25th.

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Any of above sent by express at purchasers expense at prices quoted, or entire lot for only \$4.50.

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BRUNN Nails up signs, distributes circulars, papers, samples, etc., throughout our Blackhawk and surrounding counties only \$3.00 per 1000. Address, W.H.BRUNN Waterloo, Ia.

Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad. paid then; *is paying yet*. He has been kept constantly busy, employs three men to assist him, clearing *on their labor* from \$10 to \$15 a day distributing circulars at \$3.00 per 1000 for many firms who saw his ad. in THE HERALD. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm, who employ you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30. 15 in advance and \$15 when work is done. Parents make your boy a present. Start them in this growing business. Begin this neat business before some one in your county gets the start of you. "Come in on the ground floor." Instructions How to Conduct the Business, Free to each distributor ONLY, who sends us \$2.40 cash or postage stamps for a 4 line "ad."

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F. H. LATTIN & CO.



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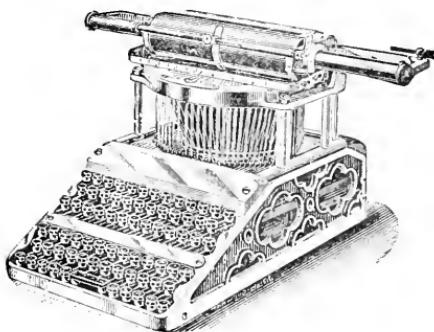
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If you will send in your renewal, or subscription to the OÖLOGIST for 1894 at once, or not later than Jan. 1st '94, and enclose 6 cents in stamps additional, we will mail you your choice of the following (in addition to the two coupons):

1. 15 Checking Lists.
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11. 20. all different, back numbers of the OÖLOGIST.

This offer will positively close on Jan. 1st, and will never be repeated.

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Should you desire more than one of the premiums, you can add 15c. for each additional one, to secure at this price, however, you must have the order accompany your subscription or renewal, otherwise they will cost you regular rates, which range from 25 to 50 cents each.

Should you desire the complete set of eleven premiums, we will send you the entire lot.

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THE

OÖLOGIST.

Monthly.

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VOL. X.

ALBION, N. Y., DEC., 1893.

NO. 12

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

I HAVE added Two Hundred dollars (\$200) worth of specimens to my collection through the Exchange Columns of the OÖLOGIST. J. M. KILVINGTON, Mason City, Ia.

I FIND that exc. notices in the OÖLOGIST pay me 100 per cent. better than in other papers. EDW. WALL. San Bernardino, Calif.

FOR EXCHANGE.—Printing press, chase 5x7, for stumps, GEO. B. BENNETT, S. W. cor. Beach and Lafayette, Terre Haute, Ind.

TO EXCHANGE.—\$12 worth of eggs in sets with data for postage stamps, also cigarette pictures for stamps. BERYL HODGE, Sterling, Kans.

WANTED. A first-class Incubator and Brooder, can offer eggs of Kites, Hawks, Vultures and some cash. Address, KIT ATKINSON, Dime Box, Texas.

I HAVE Vol. vii. "Paper and Press," Vols. iv, v, vi, vii. "Inland Printer" for Eggs, Minerals, Fossils, Indian Relics, A. L. STEVENS, 206 Elm St., Northampton, Mass.

WRITE me lowest price Cones' Key, Bendire's Nest and Eggs North Amer can Birds, sets of Sharp-shinned Hawk, Pigeon Hawk, Golden Eagle or "Duck Hawk." EDWARD ARNOLD, Battle Creek, Mich.

MUSICAL CONTEST.—"Protective Tariff Grand March," and "Free Trade Grand March." Both pieces are beautiful, bright and showy marches of medium difficulty for the Piano or Organ. Price 40 cents each at all music stores or by mentioning the OÖLOGIST they may be procured at one-half price from WILL L. THOMPSON, East Liverpool, Ohio.

I HAVE over \$16 worth of singles to exchange for a kodak, skins or Orn. or Tax. works. EDWARD WALL, San Bernardino, Cal.

FOR EXCHANGE.—For eggs in sets. Western or Southern preferred, an Eclipse camera, 3½x4½ in. A condition with tripod, hardwood carrying case, printing frame holder, etc. HAL GIBSON, El Paso, Illinois.

TO EXCHANGE.—A collection of foreign stamps and a few sets of eggs with data for sets No. 430 and 431 with nest. P. A. MULTER, Ashford, Catt. Co., N. Y.

WHAT offers have I of Terns' and Gulls' eggs for cash. Have also several voles of Youth's Companion for eggs. ERNEST IRONS, Council Bluffs, Ia.

CAPEX'S OÖLOGY of New England. The edition of this magnificent work is exhausted, we have only *one* copy left. Price \$15. If you want it speak quick. F. H. LATTIN & Co., Albion, N. Y.

WANTED.—To correspond with parties who can furnish birds in the meat this winter. Will make exchanges, and pay cash for desirable specimens. No cards. WHIT HARRISON, La Crescent, Houston Co., Minn.

FOR SALE. Black-chinned, Rufous and Anna's Humming birds eggs for 50c with nest and data. Some very pretty nests among the lot. R. H. ROBERTSON, care First Ward Grocery House, East Los Angeles, Cal.

TO EXCHANGE.—First class singles for singles and sets. Nothing but first-class eggs taken. Send your list and receive mine. Address, FRANK B. JEWETT, Lamanda Park, Cal. or H. A. YOUNG, Pasadena, Cal.

DATA'S Egg Check List of N. A. Birds. We desire one or two copies of the First Edition. In good condition will allow 75c each for same in exchange. F. H. LATTIN & CO., Albion, N. Y.

EXCHANGE.—Colt's 45 cal rev. lever. In good condition, full nickel plate, rubber handle, belt and holster, for best offer in books on Ornithology and Oölogy, excepting Cones' Key. GUY POTTER, 110 East 3rd St., Peru, Indiana.

NOTICE. I have over 225 varieties of first-class eggs, a good many in sets, nearly all with data, to exchange for a good double breech loading shotgun revolver pistol, microscope, Cones' Key or Ridgeway's Manual, climbing irons. Write for particulars and state what you have. S. B. CRAYTON, Anderson, S. C.

ANY ONE wishing to purchase an Old Flint Lock Rifle with Bayonet, complete, in fine condition, write to A. B. ROBERTS, Weymouth, Medina Co., Ohio.

17 VOL. various magazines and collection of minerals to exchange for sets, curios, climbing irons or rifle. Send for list GUY ARMITAGE, 779 Hubbard St., Milwaukee, Wis.

WANTED.—Sets of (A. O. U. numbers) 325, 326, 337, 365, 375, 378, 416, 420, 601, 637, 675, 676, 683, 713, 718, 727 (all after 637 with nests if possible) in exchange for eastern sets. J. H. BOWLES, Ponkapog, Mass.

KODAK No. 2. I have a Kodak No. 2, new upon which the seal has never been broken and loaded with 60 exposures. Sole leather carrying case. Cost \$2.50. Will sell at a sacrifice. MRS. FRANK H. LATTIN, Gaines, Orleans Co., N.Y.

TWO BIG BARGAINS.—A friend has left with us his collection of eggs for sale. It consists of \$30 worth of desirable sets and \$15 of A. No. 1 singles. All are strictly first-class and F. H. L. & Co. will see that they are properly and carefully packed. Either the sets or singles will be sent by express for only \$8.50 cash or both for \$16.50. No exchanges entertained. To parties meaning business a list of species in the collection will be sent for stamp. Address, Bradt, care F. H. LATTIN & CO., Albion, N.Y.

FOR SALE.—First-class skins of the Turkey Buzzard, Black Vulture, Ducks, Gulls, Pelicans, Swans, Curlews, Herons, Snipe, etc., etc. I will for \$2 cash forward the following *Fresh skins* providing 50c. extra is sent to pay express viz. Turkey Buzzard, Fox Squirrel and Meadow Lark. Large orders taken at reasonable rates. NATHAN L DAVIS, La Porte, Texas.

I RECEIVED 10 times as many answers to that one little exchange in June OÖLOGIST than I did in all of several other exchange ads I ventured in other papers, which cost me over \$10. ED VAN WINKLE, Van's Harbor, Michigan.

"*INSTITUTIONES REI HERBARIE:*" 3 large vol.—leather—published in Paris in 1719. Vol. I contains 750 pages text. Vol. II and III, each contain about 250 pages of illustrations. Will exchange for \$10.00 with of standard books on Natural History (ornithology preferred) or back vols. of the Auk. FRANK H. LATTIN, Albion, N.Y.

BIRDS EGGS, 25c. novels, foreign postage stamps, rifle, minerals, fossils cigarette albums, scrap book full of cards, for Columbian (tex. 2c), old U. S. Confederate and foreign postage stamps, Indian and other relics. R. L. STEPHENS, Danville, Ills.

A HAND-INKING printing press, chase 12 by 15 inches, in good condition, for sale cheap, or to exchange for eggs in sets, bird skins, or a good collection of U.S. stamps. W. E. SNYDER, Beaver Dam, Wisconsin.

ANY Stamp Collector sending me stamps of any one country, valued at fifty cents, shall receive the same amount in West Indian stamps from me. G. C. ROBERTS, 1517 Christian St., Philadelphia, Pa.

FOR SALE or EXCHANGE.—A 52 inch Columbia Light Roadster, Ball bearings, a barrel in splendid condition, for a new Baker, Remington or other good shot gun, 12 gauge. Make offer. HORACE H. FELL, 3658 Dearborn St., Chicago, Ills.

WANTED.—Indian Relics (Stone Age), I have to offer Mounted Birds, Minerals, Eggs, etc. I also want a copy of Abbott's "Stone Age of New Jersey," L. V. CASE, Naples, N.Y.

TO EXCHANGE.—First-class singles of this locality at 25 per cent discount for sets with full data. Send lists. OTTO J. ZAHN, 427 S. Hope St., Los Angeles, Cal.

CURIOSITIES and eggs from Southern California to exchange for first-class eggs with data. Send stamp for list. Address, R. S. DANIELS, Nordhoff, Ventura Co., Calif.

FOR SALE.—Cous' Key \$5, also other bird books and collection of eggs, cheap. CHAS. E. CRAM, Columbus, Ohio.

OLD OÖLOGISTS for stamps, and all curios. 50 varieties of stamps for 10 cents. Foreign exchange and Electrical Books wanted. WALTER G. MANSUR, Pittsfield, Maine.

WILL GIVE three varieties Chinese coins for every U. S. cent, in good condition, dated before 1859. Old postal cards to exchange.

ED DOOLITTLE, Painesville, Ohio.

WOULD LIKE to exchange eggs with any person in either Texas, California, Michigan or Maine. HARRY COLLINS, Granville, Licking Co., O.

WANTED.—Set of Am. Osprey. Will give in exchange singles, value \$2. H. H. SPICER, 506 Woodward Ave., Detroit, Mich.

I WILL GIVE 15 Periwinkle shells for every egg listed at ten cents or over sent me or for every perfect arrow head sent me. Eggs will be taken in sets. JAY SMITH, Ripley, N. Y.

TO EXCHANGE.—Vol. V complete except No. 6; and No's 6, 11 of Vol. VII; No. 6 of Vol. III of the Oölogist for Vol. VIII complete of same. HUGH S. CAMPBELL, El Paso, Ill.

THE SAME mail which brought November OÖLOGIST brought four replies to my exchange notice in the same paper. I regard the OÖLOGIST a necessity to collectors who desire to exchange specimens. FRED H. ANDRUS, Elkton, Oregon.

FOR SALE.—A Belgian Flobert Rifle in good condition, 22 short or long cartridge, black walnut, checked, pistol grip stock, rubber butt plate, weight 4½ lbs., cost \$6, sell for \$3.50. GEO. J. REED, Berlin, Conn.

LOOK! LOOK! Cheapest rates on mounting birds, fish, reptiles and animalia. Specialty in mounting heads of Elk, Deer, and other big game, also all kinds of furrier work. Game birds mounted in groups or singly on panels for wall decoration. Large stock of birds singly or in groups for sale. Also all kinds of big game heads as Elk, Moose, Deer and Sheep. White Doves for floral designs. Glass eyes of all descriptions. Also birds, eggs, skins, minerals, Indian relics and curiosities. Lowest rates. Big Bargains. Special attention given to mail order department. Send for list stating in what department. D. FRANK KELLER, 54 S. 6th St., Reading, Pa.

EGGS.

From the Orient and Assam (Malahha) correctly named, at moderate price. HERMANN ROLLE, Emdener St., 4, Berlin, N. W. Germany.

PETRIFIED MOSS.—Fine specimens, postpaid, 10, 20 and 30c. Stamps taken. Silver preferred. A. B. ROBERTS, Weymouth, Medina Co., Ohio.

I HAVE a couple of fine pedigreed hunting dogs to exchange for eggs in original sets with unquestionable data. Send lists and I will make liberal offer. Many common eggs wanted. J. H. BROWN, Davenport, Iowa.

FOR EXCHANGE. One three dollar Magic Lantern with eleven slides, will exchange for best offer in birds eggs. All letters answered. Address, THOS. CRONIN, Westtown, Chester Co., Pa.

ORNITHOLOGISTS of the South and West, wishing to exchange skins of common birds for same of Michigan. Write me. Florida curios, Michigan eggs to exchange. L. W. WATKINS, Manchester, Mich.

EXCHANGE. Confederate bills and State issues, foreign coins, Indian relics, and war tokens, for the same, and C. S. A. stamps. C. S. A. bills are numbered from Massamore's catalogue, ERWIN G. WARD, Palmer, Mass.

EXCHANGE NOTICE.—I am starting a collection of U. S. half dollars, and will make the following offer in order to secure a number of the commoner dates. For every half dollar sent, I will return postpaid, a beautiful nest and two eggs of Black-chinned Hummer, extra choice condition original date. If two are sent, I will add Costa's nest and two eggs, providing you enclose five cents extra for postage. Kindly have condition good and choose as old dates as possible. Register all letters with an 8 cent Columbian stamp and I will return return 4cts. with data. C. W. CRANDALL, Woodside, Queens Co., N. Y.

TO EXCHANGE.—Mexican Opal, cut, value, \$1. for the Crystals of Amethyst, Tourmaline, Aquamarine, Garnet, Topaz or other precious or semi-precious stone. B. O. LONGYEAR, Mason, Mich.

TO EXCHANGE.—M't'd Birds, Skins, Fossils and common eggs for Coins, Stamps, Paper Money, Skins, Eggs and Fossils. All answered. WILL A. BRYAN, New Sharon, Iowa, Taxidermist in Ag'l College.

WANTED.—“Ornithologist and Oologist” vols. 1, 2, 3, 4, 5, 11 and 12. “The Observer,” vols. 3 and 4. Will pay Cash if the price is right. BENJAMIN HOAG, Stephentown, N. Y.

THE NIDIOLOGIST is becoming famed far and wide over America, as a strictly original and high class publication for Oologists and Ornithologists. There is no illustrated monthly magazine like it and never has been, in this country at least. A striking cover, inclosing sixteen pages, devoted to articles of unusual interest, sumptuously illustrated with “half-tone” engravings; \$1 per year, with free exchange notice and premium offer. The December number contained among other interesting articles, “Remounting the Great Auk,” 3 illustrations by Dr. Shufeldt; “Young Gulls in Confinement,” by Otto Emerson; “Photography Under Difficulties,” illustrated, by Egbert Baggs; “An Odd Nest of California Bush Tit,” illustrated. Among handsomely illustrated articles in January number will be one by Chas. E. Doe: “Notes on the Osprey.” Send in your subscription now and get the back numbers while they last, or send 10 cents, silver, for sample copy. Address, H. R. TAYLOR, or NIDIOLOGIST, Alameda, California.

EXCHANGE.—Blue prints of small steam engine and instructions to make same, for coins, books, minerals, curios, eggs in sets, Indian reliques, stamps or international album. RUSSELL KENNEDY, No. 60 Pearson St., New Castle, Pa.

I HAVE eggs of the Caspian Tern and American Herring Gull to exchange for Eggs, Skins, Curios, etc., ED. VAN WINKLE, Van's Harbor, Mich.

EXCHANGE.—I have a collection of North Dakota sets and singles, first-class, with complete data, and worth at catalogue prices, \$35. Will exchange for gold watch, watch chain, gun, revolver, jewelry, or anything you have that I want. Also a Cones' Key for cash. Send for list. All answered. W. C. PELTON, Dickinson, No. Dak.

WANTED. Canceled Columbian stamps. Denominations, 15c., and upwards to \$5 issues, in exchange for first-class sets with full data. All answered. H. L. HEATON, Oberlin, Kan.

TO EXCHANGE.—530 varieties of foreign stamps in 30c. album for U. S. stamps or cash. FRANK OWENS, Box 42, Brooklyn, Iowa.

TO EXCHANGE.—About 250 stamps, wanted books on Taxidermy, shooting or hunting. All answered. Address, HOWARD M. GILLET, Lebanon Springs, N. Y.

TO EXCHANGE.—A Four Pronged Fish Spear and a small Printing Press for the best offer of Singles or Hummer Skins and Nests. GEO. H. DAVIS, 129 Washington St., Painesville, Ohio.

“BIRDS OF THE STATE OF NEW YORK, by DeKay. Complete in one thick volume, 4to, cloth, 380 pages, text, illustrated with 141 finely engraved full page plates, beautifully colored by hand, showing 308 figures. This work is very scarce. It was published in 1844, as one of the vols. of the “Natural History of New York” and is usually sold at from \$16 to \$25 per copy. This copy needs rebinding and has the common names of birds written underneath each figure—otherwise clean and in good condition. Our price, prepaid, only \$12. F. H. LATTIN & CO., Albion, N. Y.

OÖLOGISTS WANTED.—We want at once, copies of the Oölogist as follows: July-August, 1886; January-February, 1887 or Dec., 1886, with the former attached; June, 1888; April, 1889; March, 1892; and April, 1893. We also desire copies of our old 1885 “Oölogists Handbook.” For each and every copy of the above publications mailed us not later than February 1, 1894, we will give 5cts. worth of anything we advertise or offer for sale or will send credit check good for the amount. In addition to the above we will forward a “World’s Fair Almanac” for each of the first ten copies of each of the six Nos. of the Oölogist desired, also the Hand Book (50 Almanacs in all.) Address at once, F. H. LATTIN & CO., Albion, N. Y.

Fine Egg Cabinets.

Have 12 of the above on hand, 8 drawers \$7 to \$9 each. Cases and cabinets to order. Ash Deer Shields, best finish 75c. A. W. HANAFORD, Taxidermist and Manufacturer of Naturalists Wood Working Supplies, 130 W. Fulton street, Grand Rapids, Mich.

**\$10,000 IS A LARGE SUM
TO HAVE**

"TIED UP"

In Shells, Curios, Specimens, and Souvenir Goods

during these close times—especially so if one needs the money and this stock is a surplus one.

The above hits our case exactly and we have *more* than this amount "tied up" in surplus stock at our Chicago Store. The World's Fair is no more. We do not need the goods in Chicago, neither do we need them back East, and furthermore do not care to go to the expense of shipping them there.

If you wish to invest (or know of anyone who does,) say \$5, \$10, \$25, \$50, \$100, \$500, \$1,000 or more, in Specimens, Curios, Supplies, or anything we have left in Chicago, either for your own collection, your school or college cabinet, a stock for the Holidays (upon which we can guarantee you to double your money,) or upon a full and complete Dealer's stock, we now offer you an opportunity to make such purchases at prices never before thought of. In fact on nice large orders we would be tempted to sell at nearly

**50 per cent. Less
Than Ordinary Wholesale Prices.**

Let us know your wants *at once*, and we will quote you prices upon which you cannot help but make a profit of from 100 to 500 per cent., or if for a cabinet, we can save you many dollars.

Address us at either Albion, N. Y., or No. 3,571 Cottage Grove Ave., Chicago, or if within 100 miles of either place, call. It will pay you.

Faithfully,

F. H. LATTIN & CO.

THE OÖLOGIST.

VOL. X.

ALBION, N. Y., DEC., 1893.

NO. 12

COLLECTING AT NIGHT.

A Tale of the Adventures of a Tough, but Nervy, Young Egg-crank.

BY DIDYMUS.

In the course of discussion with a young friend of mine.
As to who could write poetry in a manner so fine
That the boys of your paper would all think it's great—
I grabbed up my pencil, my sponge and my slate
And wrote off the doings I'm about to relate.
For I am a poet as all of you know,
And my power to please I surely can show.
So here is a poem in meter and rhyme
Which I feel very certain will win every time;
My subject's attractive as it deals with a crime.
Way back in the seventies there lived a young kid
In whose little carcass all the evils were hid—
Which together, combining, produced the egg-crank;
He had all the features, on that you can bank
Your last dollar and win: Great Scott! he was rank.
Now this tough little 'Aleck, fifteen years old or so,
Used to guy all the school-mitins to whom he did go—
Till his poor widowed mother, to save the disgrace
Took the kid out of school and found him a acc
On a farm, as 'twas plain he must work; a clear case.
So he watered the chickens and curried the cow;
Dug out the woodchucks, fed the pigs and followed the plow.
He was not very large, but a tough little pill.
Who could hustle the harrow, the grindstone or drill;
In fact there's no business but he thought he could fill.
The farmer was tickled and so was his spouse
To secure a good youngster to milk and drive cows
And so this young egg-crank's song dined their esteem:
Fed on honey, preserves, ham and eggs, milk and cream—
And the scheme he soon worked slid off like a dream.

His mother instructed the boss of the farm
That this boy was an egg-crank, and to prevent harm.
The best way to fix him, was not to permit
A single day's outing. A sensible hit.
So the kid made a play, and the old farmer bit.
The season was spring and the month it was May—
And the cute kid had permission to sleep on the hay.
So at night when he'd go to the barn for his rest
He'd fly to the woods and the fields for a nest,
In a manner the granger would never have guessed.
In this way the Kid who had good eyes for finds
When working in the day time, secured many kinds,
He had Chippies and Bluebirds and Lark's eggs not a few:
There were eggs of the Wood Thrush of delicate blue,
Green Catbirds, rare Vireos and Orioles too.
Nighthawk's eggs were in this collection well hid:
Whip-poor-will's and some Killdeer's under
secretly locked lid.
He had Shrike's eggs and Bluejay's taken time and again—
Forty-eight kinds of eggs he had taken and then—
He found a new treasure, the nest of a Wren.
Now this House Wren it built in the end of a gable,
Of the house, and this kid wondered how he'd be able
To scoop the eggs safely, with the farmer so near
But he planned the whole matter in a way that I fear
A few of my readers will think rather queer.
He took a long rope to a tree on the side
Of the house and then to it the rope he fast tied.
With a pole quickly poked the rope over the peak
Then listened and faltered already to sneak
Should the farmer be wakened and the kitchen door creak.
He next made a loop in the end of the rope
And started to climb, very still, let us hope.
Till at last on the roof he paused for a rest
He viewed his surroundings ere he plundered the nest.
And the sight that he saw you'd scarcely have guessed,

'Twas moonlight and all things could be seen plain as day.
When two men with rifles came up from the way
Of the town road, but luckily they did not see the kid
Who sat on the roof where he's partially hid; There he shivered and shook like a teakettle lid.
It was midnight, the robbers wore masks and spoke low
They sneaked to the door, knocked and cried out—Hello!
"We are sorry to call you Mr. Palmer so late Please open the door sir and our case we will state.
Neighbor Smith's cow is ailing and the danger is great."
The kind-hearted farmer came quick to the door:
He even neglected to question before It was opened. Then quickly the robbers cried "Hold
Up your hands you old duffer, we've come for your gold."
And they grabbed him, these cut-throats so fearless and bold.
But the farmer was active and strong as a donkey
And besides that when riled was inclined to be spunky
So he struck out and knocked one down flat on his back
And gave to the other a serious crack
Then the other jumped up n'gave the farmer a whack.
Then the kid on the roof bravely grabbed up a briek
From the chimney, and threw it so careful and quick,
That it knocked down a robber and laid him out stiff.
It caved in his skull, and next in a jiff
He dropped from the roof n'gave the other a biff.
Then a slip-noose was made of the rope hanging down.
And he suddenly slipped it right over the crown Of the cut-throat. Mr. Palmer held on with his might.
While the kid grabbed the rope and drew it up tight:
And the robber soon threw up his hands in affright.
Soon the neighbors came over and the sheriff drove down.
And the prowlers were hauled to the jail in the town.
Then the trial came on and the egg-crank was there

And when on the stand the kid had to swear What he did at the time. My! The people did stare.

A thousand, clean cash; the reward to the boy As the robbers were tough ones and long did annoy

The country around. And the old farmer said: "I'll adopt this smart youngster, for I'd surely been dead If the boy hadn't helped me and had a good head."

So now the young egg-crank will inherit the farm

And his plans for collecting all work to a charm He has a big egg-case, six feet high or more Chuck full of the rarest, but he always wants more.

I'll stop this tale here or you'll think me a bore.

Oölogy.

What is oölogy?

Webster says:—"The science of eggs in relation to their coloring, size, shape and number.

Who then is an oölogist?

Why, of course, one versed in oölogy. Simply then, oölogy relates to the study of eggs; that is to the egg-shell, or the outside covering of the white and yolk; or the vitellus and albumen, as the scientist would call them.

Is our whole province, then, confined to the study of variously colored shells, together with an idea of the number to be found in each nest and the shapes of these lime-like coverings.

A thousand times No!

However, there are many so-called oöologists, who are content to accept the definition as given above, and who believe that they are advancing science by simply amassing a collection of eggs and in describing the colors, phases and variations in shape and markings. And, I am sorry to add that the chiefest ones in the category are the so-called closet-naturalists, of cities, generally; the ones who sit at home and hire active collectors to do their bidding.

Now let me express myself as to my opinion of what constitutes an oölogist,

Oölogy is a branch of ornithology and nothing more, and the man who presumes to elevate it above the study of birds is as foolish as those who profess to be good ornithologists without knowing anything about the nesting habits of the common birds they study.

As I understand it, a capable ornithologist must understand the nidification of the birds he finds in his section while the oölogist should be fully able to identify the owners of the nests he visits.

Then too, to follow back a little further, we may say that ornithology is simply a branch of zoölogy. Any student of one or many branches of zoölogy is a naturalist—therefore, an oölogist is a naturalist. However, we cannot allow that every boy who sticks pins through butterflies and other insects, and spreads them in a case, is an entomologist, and neither does the act of preserving eggs, however well it is done, entire a boy or man, to the distinction of an oölogist. To Webster's dictionary, it may seem sufficient to note the accomplishments of an egg-crunk lightly, but to the increasing number of capable naturalists in our country, the requirements are drawn much finer.

In other words, the province of the egg-collector, or crank, as we may call him, in order to be well up in the slang of the times, is just as wide as we wish to make it. We can collect a lot of two-holed eggs, string them and hang the festoon on the wall—or we can study the habits of the birds—take notes and gather a great stock of information that will be an everlasting source of pleasure to us.

The boy who takes notes and studies intelligently, even if he does not collect eggs, is far superior to the one who gathers a mass of any kind of specimens without any knowledge of the subject.

It is my advice to buy books; study in the woods and fields, and keep the pursuit up from year to year.

EUGENE PERICLES.

Not a Criticism.

In the April No. of the OÖLOGIST there appeared an article under the head of "A Criticism," which in part, as far as the Barn Owl is concerned, is an unjust criticism; and I, like the author, have only foregone a reply from the fact that I do not care to get into an extended discussion, nor do I feel like contradicting a fellow oölogist who has outlived *ten generations* of our oölogical friends, but he should remember that this is a progressive age and that the birds and animals that a *few* generations ago inhabited this country have disappeared and been replaced by others of different varieties, and in some cases by entirely different species.

His criticism reminds me of "The Owl Critic" and "The Barber," wherein the critic implored the barber to "Take that Owl down." Supposing it to be a mounted bird, he said, "I have studied for years the posture of Owls and there is nothing life-like about it;" but when the Owl opened his eyes and said, "Hoo! Hoo!" the author says: "The barber kept on shaving." I have kept on collecting.

Now, Mr. Editor, I don't want free use of your columns for a discussion on Barn Owls, for with the information at hand I could write a volume on it, but I would like to vindicate myself by quoting from such authority as, F. M. Noe, who says that he has mounted no less than thirty that were killed in Hendricks Co., Indiana. The Indiana State Taxidermist has a set of Barn Owl's eggs taken in the State. The State Report of Indiana states that the "Barn Owl" is generally distributed over the state. Mr. A. Butler says the Barn Owl is frequently met with in Indiana. Mr. J. W. Hitt of Indianapolis writes me that he "has investigated the Barn Owl in Indiana, since he read Mr. Sirron's article, and although Mr. S. has lived a long time he is off on the

Barn Owl in Indiana?" Mr. W. K. Saul, L. Eavans, and numerous others I could mention, have in a series of correspondence with the writer, pronounced the Barn Owl a resident of this State. So, now, "Boys of Indiana" if you find a nest of the Barn Owl in Indiana *make sure* of the identity and then make your data without fear of contradiction, for you have the best authority of the State on your side.

I fully agree with "the critic" that every collector should carefully and positively identify each and every set they take. I have watched a nest for hours to make sure of the identity when I was in the least doubt.

I was for a time discouraged and thought perhaps I was wrong, but with letters from some of the best authority in this and adjoining states substantiating my judgment I am still in the field more enthusiastic than ever.

If Mr. Sirrom will kindly correspond with me on this subject I am sure I can convince him that he is mistaken; and then I shall ask him to retract what he has said, as I feel he has done me an injustice as well as cast a reflection on the authority of the OÖLOGIST and the sagacity of its most able editor.

I do not claim to be perfect, nor infallible by any means, but Mr. Editor I believe it good policy to "Look before you leap." Investigate before you criticise a thing. Mr. S. certainly did not do so in the case of the Barn Owl at least.

In the case of the article in the January No. it seems to me it would be owing to his enthusiasm, whether it would be a pleasure to hunt when one was so handicapped, but surely his observations *could* and *would* be of as much profit as though he had traveled in aristocratic style. It appears according to the very interesting and valuable articles recently published in the OÖLOGIST on "The Life of Alexander Wilson," that this noble man ex-

perienced more hardships than could possibly have attended the author of the aforesaid article. Yet "the critic" has not taken exception to that, and again I have found that an ax or a hatchet is almost indispensable to good live collectors. Now, readers in hopes that our elder brother will endeavor to rectify his unintentional mistake, and so right the misinformed "boys of Indiana," I beg to subscribe myself,

GEO. W. PITMAN,
New Castle, Indiana.

A Nest of the Canvas-back.

Seaburn, Manitoba, June 4, 1893. For some days I had observed a pair of Canvas-backs frequenting a slough that ran back from the Lake a short distance, the sides of which were covered with a rank growth of small bushes coarse grass, old roots of trees and small patches of dry ground here and there, just the place I thought for a nest. For several days I had paid the place a visit, upon each occasion observing the birds up at the far end of the slough, and although I searched carefully every time I never could discover the nest which I felt sure was there. On the morning of the 4th I was awake early and finding it blowing strong from the North with a fine rain falling I determined to go and have another search for the Canvas-back, as I knew such a day was good for "egging."

Swallowing a few mouthfuls of breakfast I pull on my rubber boots, don my waterproof coat take my gun and start off for the slough, which is about 2 miles distant. On my way I find a nest of the Sora Rail containing 11 eggs which are transferred to one of my boxes, Yellow-headed Blackbirds nests are numerous, but I am impatient to reach my destination and don't stop to examine them. While I am making a short cut through a path of bush I come

across two pairs of Maryland Yellow-throats evidently mated. I take note of the locality intending to visit it again, which I did upon several occasions but never saw the birds again. I hurry along and in a few more minutes I am at the slough, entering the water I start to wade slowly up keeping a sharp look out for the birds, in a few moments I can see every yard of the water but no birds are to be seen, while I am standing wondering what can have become of the birds something comes skimming round the corner of the slough out from the Lake, and comes within 30 yards of me and then turns off back into the Lake, not however before I have identified it as a male Canvas-back, my gun goes to my shoulder as the bird comes so close, but I think better and let him go.

Feeling encouraged I start to wade on again and have not gone more than 160 yards, when I hear a flutter and a splash about fifteen yards in front of me and while I am gazing intently ahead I see the head, neck and partly submerged body of the female, as she comes to the surface of the water (she had dived off her nest as I thought) no sooner is she on the snrface than she takes wing and is soon away.

A search of a few seconds is sufficient to find the nest, situated on a small patch of dry ground about two yards in diameter, it is composed of dry grass with a little down and contained five eggs of a pale greenish color, as I knew this was not the full set I leave them after carefully marking the place, I visited the nest twice after this and on both occasions the bird was off and the eggs were covered up; after leaving the nest four days and only finding seven eggs I came to the conclusion she had laid her full set and so took them.

G. F. DIPPLE,
Toronto, Canada.

SCENES FROM THE LIFE OF ALEXANDER WILSON.

His Southern Subscription Tour.

G. VROOMAN-SMITH

VIII.

Although Wilson's Northern tour was devoid of a brilliant financial success, yet it by no means discouraged him from further pursuing the task he had entered upon with so much ardor and enthusiasm. Wherever he went he exhibited his work with so much zeal, was received with so much kindness, loaded with so much praise and compliments, that to secure only forty-one subscribers for his toil and diligence was a discouragement great enough to depress the bonyant spirits of any one save Alexander Wilson. To him, who was so accustomed to disappointments and failures although it did cast a considerable gloom over his prospects of future success, yet by no means so depressed his hopes as to defer his departure for another extended subscription tour through the south, after a brief tarry with his friends at Philadelphia.

Winter with its many inconveniences had fairly set in when Wilson bent his steps in the direction of the south on the second of his famous pilgrianges in search of subscribers and information. Unaccompanied he pursued his journey towards Baltimore where he arrived early in December, 1808. The journey was a fatiguing one, performed at a disagreeable season of the year, and without a single companion to lessen the sense of solitude naturally arising from ones mingling with strange people in a strange locality. He pursued the exhibition of his prospectus at Baltimore with great determination and zeal, and was rewarded by securing sixteen new subscribers. Elated with this unexpected and gratifying success

at Baltimore our traveller hopefully turned his face in the direction of Annapolis. Here he passed his book through both houses of the State Legislature which was then in session, but as far as securing subscribers was concerned the sages of Maryland might just as well have been somewhere else, as the negatives were everything and the affirmatives nothing. Every Lawyer on the bench examined the book with the utmost deliberation, but the enormous sum of one hundred and twenty dollars for a book seemed to them wholly out of the bounds of reason, and Wilson was obliged to depart without a single name being added to the list. At Baltimore he met with flattering success, at Annapolis with a most discouraging failure. Where so many wise men were assembled one would suppose his book would be favorably received, but in this case as in innumerable others the sum of one hundred and twenty dollars arose like an evil genius between him and his hopes. Still our hero for such he deserves to be called was in no wise discouraged by the decision of the people of Annapolis, but with determined step he pursued his route through tobacco fields, sloughs, and swamps of this illiterate corner of the State, as he chose to call it, to Washington a distance of thirty-eight miles. This journey was attended with considerable inconvenience and misery there being but a few miles of road, and a poor substitute for a road at that. He writes that on the way he saluted and opened fifty-five gates with all the patience he could muster, each one compelling him to descend into the mud to open it. The Negroes were particularly numerous in this region and he declares them as being wretchedly clad, in some cases their filthy bundle of rags being scarcely sufficient to cover their nakedness, yet the negroes were extremely obliging and kind and very civilly showed

our traveler the road, when he halted before their miserable huts to inquire the way.

The Capitol City Washington presented a much different appearance at the time Wilson entered it, than it does to-day. The Capitol buildings were new and about the only edifices of any account then in the city. Wilson says, that the only improvement going on was the building of one brick house. Thomas Jefferson was then President and it was he to whom Wilson applied for encouragement. Jefferson was a great lover of birds, in fact he had corresponded with Wilson previously in reference to a strange bird seen in his native state, Virginia, and which Wilson was enabled to identify as the Wood Thrush. The President received Wilson with marked respect and kindness; their conversation being much on the subject of ornithology, which subject Jefferson was deeply interested in and to which he paid considerable attention to, even with the more important duties of Executive to look after.

At this time there was living in Virginia a person who had spent the whole of his life in the interesting study of ornithology, and who was occupied with collecting information on the subject for the President. To this gentleman the President gave Wilson a letter of introduction and intrusted the commission of gathering the information to him.

From Washington the Ornithologist pushed his way to Norfolk, Virginia, where he had considerable success in exhibiting his book. He found the streets of Norfolk, as were the majority of the city streets in the south at that time, little better than mud holes through which he urged his horse with difficulty.

It may be well to insert in this connection a brief account of the general features of the country and its inhabitants in order that the reader may form

an idea of the hardships our traveler experienced in his journey from Washington to Savannah.

To a stranger the climate of Virginia and the Carolinas was such that without proper preventatives one was endangered with that dreaded southern disease, malaria fever. Wilson said the inhabitants use brandy as a safe guard for this disease and so universal is the practice that the first thing you find them employed in after rising is, preparing the usual morning's beverage, which is the brandy to fly. He said it was almost next to impossible to meet a man whose lips were not parched and blistered with drinking the poison. He lodged one night at the house of a planter, who informed him that out of a family of thirteen children only three survived all having been carried away with the bilious fever. There were two alternatives to the inhabitants; drink brandy, or have the ague. Wilson rather than form the habit of using the poison decided to take his chances. He escaped the disease, and how he remained in that latitude four months without contracting the fever was a wonder to himself and to the inhabitants.

The accomodations our traveler received while in this region were somewhat different from what they are now and from what he was accustomed to receive. The taverns in the south were shocking substitutes for public houses and were the most desolate and wretched places imaginable; bare, bleak and dirty walls, with one or two broken chairs and a bench, forming all the furniture of an apartment. The negroes conducted everything, there being but a single or a few white females in a tavern, and these seldom made their appearance. The males were unworthy of the name and added to the unappetizing flavor of the establishment a dozen or more half clothed negroes surrounded by glad of the opportunity

of waiting on a stranger. These taverns were elevated on props about four or five feet from the ground leaving a roomy retreat below for the hogs of which each landlord or planter would own a hundred or more. Wilson says every night the hogs came to rendezvous under the house and with whose charming vocal performance the wearied traveller is serenaded the whole night long, till he is forced to curse the hogs, the house, and everything about it.

At Washington, North Carolina he crossed the Tar river and journeyed to Wilmington, a distance of over a hundred miles, and along the whole route there were only three taverns, two of which were closed, the landlords having died with fever. Later he writes from Charleston; "the general features of North Carolina, where I crossed it, are immense solitary pine savannas, through which the road winds among stagnant ponds, swarming with alligators; dark sluggish creeks of the color of brandy enormous cypress swamps, which to a stranger, have a striking desolate and ruinous appearance." Within the recesses of these immense cypress swamps lived many rare birds unknown to Wilson. He attempted to penetrate some of the swamps in search of birds; but was obliged to give up in despair, however he found many birds on the margins of these swamps unknown in Pennsylvania. Remaining at Wilmington a brief time he rode through solitary pine savannas, and cypress swamps as he had done before, sometimes thirty miles, without seeing a hut or a human being. All through South Carolina he pursued a circuitous route in order that he might visit all the planters.

Wilson fared even better than his horse for soon after he had left Wilmington his trappings and belongings were lost by continual exertion and he was obliged to exchange with a planter,

getting a veritable southern horse in exchange. He said of his new horse; "two or three times he has nearly broken my neck and at Georgetown ferry he threw one of the boatmen into the river; but he is an excellent traveller, and for that one quality I forgive him all his sins, only keeping a close rein and a sharp look out."

Our traveler has reached Charleston, at which place he says he was as well acquainted with the streets as he was with those of New York and Boston. He was particularly struck with the super abundance of negroes in Charleston, as he was in all the southern cities, and says that they destroy the activity of the whites. He says that even the bricklayers stand with their hands in their pockets and overlook their negroes. With the exception of the neglect of a few, who agreed to supply him with the names of those likely to subscribe, he was well pleased with the inhabitants of Charleston and added a number of names to his subscription list. Wilson heard of General Wilkinson's arrival in the city, and at once called on him and was rewarded by entering his name on the list and receiving his unbounded praise.

Late in February he set out in the direction of Savannah, and it was on this journey that he became acquainted with the Ivory-billed Woodpecker, the King of the *Picus* family. An account of the remarkable experience he had with one of these birds appeared a number of years ago in the OÖLOGIST under the title of "A Red-headed Family" and from which I reduce the following, as my readers may have forgotten the incident. He wounded an Ivory-billed Woodpecker slightly in the wing, which on being caught uttered a constant cry, resembling that of a young child. The cry was so distressing, that, as he carried the bird through the streets, people hurried to the windows to see from whence it proceeded. As

he drove up to the tavern, the landlord and bystanders were much perplexed by Wilson's asking for lodgings for himself and baby. Finally he uncovered the bird much to the amazement and astonishment of the people. He took the woodpecker upstairs, and locked him in a chamber, while he went to give directions concerning his horse. In less than an hour he returned, and on opening the chamber door he found the bird had mounted at the side of the window, a little below the ceiling, and was battling for liberty by making a hole through the side of the house. The bed was covered with large pieces of plaster, the lath was exposed in a space fifteen inches square, and a considerable hole beaten through the lathing to the weather boards; so that, had not Wilson returned, it would soon have released itself from bondage. He then tied the bird to the top of a mahogany table by means of a string fastened to its leg and went out in search of suitable food for it. When he returned, he found that it had given vent to its rage by pecking holes in the table, which was entirely ruined, with blows from its powerful bill. While Wilson was sketching it, it cut him in several places, and displayed such an invincible spirit, that he was tempted to restore it to the woods. It refused all food, and lived but a few days.

At Savannah he found the air as oppressive as in midsummer in Philadelphia; although it was early spring the thermometer registered as high as eighty degrees. The streets he said were beds of burning sand. Here he met a naturalist, a Mr. Abbot, who had published a book upon the insects of Georgia, and who from a long resident of the state and a competent observer, was able to give Wilson a store of information about the southern birds.

At Savannah he was advised to go to Atlanta, where he was assured he could get fifteen subscribers, but he thought

that would not recompense for the extra expense and trouble. Moreover his health was uncertain and his money getting low, so he decided to return to New York by sea, which he did and arrived there in March, 1899.

He says himself that his southern trip was the most arduous and fatiguing he ever undertook. Yet as far as subscribers were concerned this trip was more profitable than the northern, for now he had succeeded in gaining two hundred and fifty in all, nearly two hundred of which were obtained in the south, but he said they were obtained at a price worth more than five times their amount. The greatest benefit derived from this journey consisted in the great mass of information obtained concerning the birds which winter in the South, and some that never visit the Northern States.

Notes on the Birds of Henry Co., Iowa.

Thinking possibly that a few of my notes for 1898 might interest the readers of the "OÖLOGIST" so here they go. I did not get out very early in the spring so I missed¹ the earliest nesters.

April, 8—I found a nest of the Red-tailed Hawk (*Buteo borealis*) placed in a large sugar maple about 50 ft. from the ground. It was quite a bulky affair, for the birds have nested there for three consecutive seasons, and each year added more material to the nest. On mounting to the nest I found it to contain three eggs of a whitish color, marked with spots of reddish-brown, one of them marked but faintly with spots. The eggs measure as follows; 2.06x1.69, 2.06x1.81, 2.12x1.75. This is the most plentiful hawk that we have nesting in this locality.

May, 2—I found a Red-shouldered Hawk's (*Buteo lineatus*) nest, placed about the same height from the ground

as the Red-tail's, it contained three eggs, that measure; 2.06x1.69, 2.09x1.72, 2.12x1.69. The eggs were so nearly the size and color of the Red-tail's, as to defy identification by the eggs. This hawk is next to the Red tail in abundance in this community.

May, 5—I flushed a Ruffed Grouse from her nest which contained twelve eggs. This bird is becoming quite rare in this county.

May, 11—I collected a set of four eggs of the Cooper's Hawk, (*Accipiter cooperii*) they were of a light blue color and but faintly spotted with brown. The nest was placed in a black oak 25ft. from terra firma I think it was an old crow's nest. The eggs measure; 2.06x1.62, 1.88x1.56, 2.05x1.62, 1.97x1.60. This little falcon is the most common of our smaller hawks that we have nesting in this county. He makes a great deal of racket in the nesting season.

May, 17—I found a nest of the Towhee, (*Pipilo erythrorthalimus*) which contained three of its own eggs and five of the Cowbird's. The nest was placed under the bank of a small rippling brook not more than 4 ft. from the water's edge. This bird is very plentiful in this county, and I often find the Cowbird's egg in its nest.

May, 25—I secured a set of five Worm-eating Warbler's (*Helmithoecus vermivorus*) eggs, they were of a creamy white with spots and specks of red and brown. The nest was placed in dense woods and composed of leaves lined with hair-like moss and horse hair. The eggs measure; .71x.55, .72x.57, .71x.58, .76x.55, .77x.56.

This species is quite rare in this country, this being the only nest I ever found.

May, 29—I secured a set of four Blue-gray Gnatcatcher's (*Polioptila caerulea*) eggs from a nest placed in an ironwood about 15 ft. from the ground. The eggs were of a bluish white color

speckled with chestnut, one of them had a flesh colored ground. There was a Cowbird's egg in the nest. The nest was the most beautiful of any that I have ever found of this species, it was covered nicely with lichens outwardly and lined with fine grass and hair. This bird is by no means rare in this county, yet its nest is not found very often.

June, 2—I found a nest of the Blue-winged Warbler's (*Helminthophila pinus*), which contained three of its own eggs, and two of the Cowbird's, the nest was placed on the ground at the foot of a clump of may apples. It was composed of leaves outwardly lined with air. This Cowbird (*Molothrus ater*) is a feathered culprit that ought to be exterminated from the feathered tribe. It is seldom that I find a small bird's nest without one or more of the Cowbird's eggs in it. I have found its eggs as early as April 26 and as late as July 21. If the female lays off and on during all this time no wonder they increase rapidly, and I see no reason to prove that they do not. I would like to hear from others on this point.

June, 14—I collected a set of four light-blue eggs of the Wood Thrush (*Turdus mustelinus*). The nest was placed in a white oak about 20 ft. from the ground near a running stream and composed of leaves mixed with mud and lined with fibrous roots. This bird is quite plentiful in certain localities in this county.

June, 16—I secured a set of three eggs of the Prairie Horned Lark, (*Otocoris alpestris leucotis*) from a nest placed by a hill of corn in a cornfield and composed of grass lined with hair and bits of wool. This bird is one of the most interesting that has come under my observations. It is very plen-
tiful, staying with us all the year. It nests from March to August. I found a nest last year the first of April, which contained three half-hledged birds, the

next day there came quite a snow, the next morning I went to see how the nestlings were and behold! there was only a lifeless body, and the nest deserted. I have observed a habit that this bird has that I have not seen described, it is that of mounting in the air by repeated short flights, and poising between each and singing its little lays, and when it descends it extends its wings and drops like an arrow. Often of a spring morning have I watched this bird as it ascends and descends the sky, as if overflowing with joy. It only does this in the early spring I think.

Aug., 25—I collected a set of four eggs of the Yellow-billed Cuckoo's (*Coccyzus americanus*), from a nest placed on a horizontal limb of a white oak, about 10 ft. from the ground and composed of twigs very loosely put together, even so I could see the eggs through the nest. In the October "OÖLOGIST" Mr. Wake say's in his interesting article "Ould Lang Syne" "that he found a Yellow-billed Cuckoo's nest Aug. 17, 1893 and is that not very late?" It is not for this locality, for most of the nests that I have found have been in August although they nest in June and July. You will often find young half-hledged birds in the same nest with fresh eggs, in fact I have not found a nest that contained all fresh eggs.

Sept., 16—I secured a set of four light blue eggs of the American Goldfinch (*Spinus tristis*), from a nest placed in a thistle and composed of grass, fine rootlets, interwoven with cobwebs, and was lined with wool, thistle down etc. This is the latest bird to nest we have in this county.

I am yours in the study of birds.

DAVID L. SAVAGE,

Salem, Iowa.

THE OÖLOGIST.

A Monthly Magazine Devoted to

OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.
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FRANK H. LATTIN, WALTER F. WEBB,
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Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND CLASS MATTER.

Raptores of Michigan.

(SIXTH PAPER.)

BY SCOLOPAX.

SHORT-EARED OWL, *Asio accipitrinus*, (Pall.) I know so little about this bird that I can advance but little in the way of notes, regarding it, and must mainly give the notes of others. Ten or more

lists of Michigan, and state local lists embrace it, and both peninsulas offer notes on this species.

The Short eared Owl is properly considered a migrant in our state, as most of the records are taken in spring and fall, still several observers report that the species breed and is a resident.

It is rather difficult to draw a fair conclusion from these notes particularly if we are critical, as their observations do not agree. I have at hand the notes of some observers, who, though not known to the reading public are nevertheless reliable. These notes in connection with the records mentioned above and my own observations lead me to speak of the Short-eared Owl as follows:

A migrant generally in Michigan, coming from the north, probably from as far as the fiftieth parallel, and reaching our southern boundary, in October usually, mostly pass us to the south; but some remain during the winter. Again common in late April, after which few are seen.

I have seen this owl as late as May 16th in the spring, while I have known it to be common in mid-winter, but I do not know of an instance of its eggs being taken in the state. "Resident breeds" may do well enough to fill up space in a catalogue, either printed or manuscript, but this information so common in our lists all over the country with this, as well as other species, is copied by one authority from another until at last it is accepted fully without one jot of evidence laying claim presented. I do not deny that the Short-eared Owl breeds in the state, but I should be pleased to receive complete notes on the nesting from a reliable source.

Now a word about this owl and other birds as residents. I do not think that a Short-eared Owl ever remains in Michigan throughout the year, but, as they are migrants to a certain extent

I believe Michigan Short-ears leave us for the south and that those we see in the winter months are representatives from the far North, perhaps from as high as the 60th or even the 70th parallel.

The Short-ear is found to be quite common at times, and a young observer who scares up five to ten of them from the North where he is hunting spring or autumn, is liable to enter 'abundant' in his note book. However, it may be a long time before he meets another family or band.

This bird seems to prefer low marshy tracts where it is found in the coarse thick grass. It finds its food in these situations, another favorite resort is wild fields on prairies. The members of a family are often found in company in the autumn and winter, and as many as six or seven have been seen in one band.

The nest is said to be built on the ground and generally in the coarse grass. The eggs, five to seven in number, are white and globular and possess the usual features of owl's eggs. Davie says that the nest is sometimes placed beside a log, at the foot of a bush, or in a burrow made by a rabbit or muskrat.

BARRED OWL, *Syrnium nebulosum*. (Forst.) This is one of our best known nocturnal birds of prey. I think that more Barred Owls are killed than of any of the owls excepting the Great Horned.

This bird is well distributed and I have found it in many parts of the state, including pine lands, oak woods on the uplands and in low woods. Am inclined to think that it prefers beech and maple, and ash and basswood forests.

It is much confined to the woods, rarely leaving the forest, unless occasionally at night when on a foraging expedition. It is eminently a night flyer and though it can see to fly during the day it rarely attempts diurnal

trips, unless it is cloudy. I have repeatedly walked and ridden within three or four rods of an owl which was perched in a tree, before it would take wing. When disturbed, it noiselessly flaps its way to another perch, a few rods away, from which it will only take leave when pressed. It is fair to say that this owl has the poorest sight during the day of any of the birds of my neighborhood, with perhaps one exception. I have often observed one in the woods which would gaze constantly at me with big, dark, staring eyes. At these times if an observer walks about the tree on which *nebulosum* is perched, the head will apparently continue to revolve, causing one to wonder why the neck is not twisted off. In reality, the owl turns its head about, but so quickly that the act can only be detected by a very quick and observant eye.

Although so common, I have never taken the eggs of this species, and as far as I can learn, the collectors throughout the state have not met with flattering success. Many egg-cranks have not found this owl nesting, and very few indeed have secured more than one set of eggs. Repeatedly, we have patiently watched for the nestings arrangements to be completed but something was sure to occur to scare the birds away.

Richard Westredge has found two sets. One in a large elm on April 28, the 1891 contained three young birds. One nest in a small grove found April 9, 1893 in a basswood quite 60 feet up, and evidently an old hawk's habitation, held a single egg well advanced in incubation.

K. R. Willhelm gives the notes: Apr. 21, 1887. One egg and one bird about two days old, in cavity of dead beech, Kalamazoo Co., Mich. Nest of dead leaves and feathers; nearly level with opening. April 15, 1891. Three eggs, advanced incubation. Cavity in large dead oak.

I am informed that Mr. E. W. Durfee of Houghton has taken the eggs from the same nest for three years; the earliest date being March 14th and the latest April 4th. Mr. Durfee says the eggs are three in number, white and spherical.

The eggs are usually deposited in a hollow in a tree, but Oliver Davie says that an old hawk's or crow's nest is also occupied, and this is not unlikely when we compare the nesting habits of the Great Horned Owl, which are well studied hereabouts, and known to vary in choice of site.

In 1879, April 12th, my lamented friend, Charles W. Gunn of Grand Rapids, found a pair of Owls nesting in a hollow limb of a sycamore tree. Mr. Benjamin F. Syke, of Kalamazoo, Michigan, has twice found this owl breeding in Southern Michigan. Joseph Westnedge, Frank Judson and Leon Reed have also found nests in Kalamazoo or adjoining counties. All of these nesting sites were hollows and generally well up from the ground.

The eggs of the "Round-head," or "Wood- Owl" are two or three in number. Some authorities say four, but this number is not reached in the Peninsular State. In appearance, they may be said to be good smaller copies of the eggs of the Great Horned Owl.

The notes of this owl are very pleasing to me. Hollow and reverberating like the notes of the larger owls, they still are quite dissimilar from the songs or cries of all nocturnal birds. It is difficult to describe, and to be appreciated ought to be heard. To me it is very pleasing, and the cries of a Barred Owl about the camp always lend a marked attraction to this free out-door life.

On April 9, 1873, I secured a fine live specimen which I kept as a pet. At first it was very savage and would throw itself on its back when touched, defending itself with its claws. After some weeks it improved in manners

and would take strips of meat from my fingers. It finally accepted caresses and seemed to like to be stroked, but it always mopped its bill with a loud noise whenever I approached. I owned it for a year, during which time it flew about the hay loft of the barn. At times it was sadly neglected, but I am satisfied that it was about able to take care of itself, at least for a time, for I found the boluses of hair and bones which it at times threw up from its crop and which upon examination proved to be the remains of mice which were quite plenty about the barn. This owl would eat fish, flesh or fowl with equal avidity and would always swallow birds, mammals or fish entire if possible. Never unwilling to accept and swallow food if of proper dimensions, he would never in my presence touch or tear to pieces a chunk of meat but would patiently wait until he was alone. At last he escaped one buckless (for him) Sunday morning and was ruthlessly shot while the church bells were ringing, by a man who thought more of his hen-roost than he did of holding the day sacred.

This common owl is not rarely called the "barn owl" by the ignorant, and I have had specimens brought me and thus wrongly identified as this much rarer species. And I have no doubt that observations are sometimes incorrectly recorded confounding these two owls.

GREAT GRAY OWL. *Scotopelia cinerea* (Gmel.). This is a rare straggler from the far north and is very rarely seen in the Lower Peninsula of our state. Nearly all of the state lists omit this owl, and all of the older authorities ignore it, with the exception of Kneeland's Birds of Keweenaw Point, 1857. Covert, 1858, Birds of Lower Peninsula embraces this Owl. Mr. A. W. Boies has found it in the Upper Peninsula. Professor J. B. Steere embraces it in his Migration of Michigan Birds — Mr.

Brayton includes it as a rare winter visitor in Northern Indiana, and if he is correct then this Owl may be found at times in the southern part of our state. As this species only nests at the far north it will not be required to describe the nest and eggs.

RICHARDSON'S OWL, "SPARROW OWL," *Nyctala tengmalmi richardsoni* (Bonap). Embraced by Covert's Birds of the Lower Peninsula 1878. He says it is a rare winter visitor and mentions the capture of two specimens. Again in his list of Birds of Washtenaw county, 1881, he says: "A rare winter visitor, only two specimens have been secured" G. A. Stockwell in Birds of Michigan, published in Forest and Stream, reference not now at hand, embraces this Owl as a bird of the Upper Peninsula. J. A. Allen, Esq says that this bird is probably a winter visitor in our U. P. as it has been taken in Ohio, Illinois and Wisconsin. A rare straggler.

SAW-WHET OWL; ACADIAN OWL, *Nyctala acadica* (Gmel). This is our smallest Owl. Dr. H. Atkins took one at Locke, Dec. 18, '82, which weighed less than two ounces. Some observations have been made in the state which lead me to think that the collectors confounded this species with *megascops*, and particularly is this probable in the nesting notes. Errors will creep into the best of lists and where persons of authority make even more serious mistakes, and wrongfully accredit a strictly Pacific slope species to Michigan, it becomes a serious matter as well as ridiculous in the extreme. One obsolete catalogue of winter birds embraced the Pigmy Owl, *Glaucomys gnomus*, Wagl. as a Michigan bird, and Professor J. B. Steere of the State University at Ann Arbor makes the same error, by including the Pigmy as a state resident in his Migration of Michigan Birds published in 1880. I merely mention this to illustrate now seriously an authority can ef-

fect the accuracy of the notes of the younger observers of the state. A great many collectors immediately called their Acadian Owls, "Pigmies" and an occasional question comes up regarding this error, even at this late date.

The Acadian Owl is so generally reported that authorities will not be presented. From Sager's time in the thirties to the present nearly all observers in both peninsulas have found it and I am satisfied that it is a generally distributed species but never common.

It is reported to nest in Indiana. Covert reports one nest in Washtemaw county, Michigan on May 23, 1879, and adds that it is a "very common winter visitor." I do not think this application "very common" is suited to this species anywhere in America and it is to be doubted if any collector could bag two specimens per day for a month in any locality. Collectors of Kalamazoo county, which lies one hundred miles west of Washtenaw have not secured six specimens, all told, in twenty years.

The nests have been taken in Oakland county and the downy young captured in Kent county. The globular, white eggs, five to seven in number, are deposited on the chips at the bottom of an excavation, generally an old Woodpecker's habitation.

I have heard the odd stridulous notes which somewhat resemble the noise produced by filing a saw and from which this Owl gets one of its names.

A Problem.

It is a curious fact in studying birds, that we often find two nearly related species replace each other in one locality though they both have the same range.

I have seldom taken a walk without seeing one or more Scarlet Tanagers, yet I have seen but one specimen of the Summer Tanager though I am told the

latter was once the more abundant of the two.

There is another instance which I would like to relate. To my certain knowledge I have never seen an Orchard Oriole in this vicinity while the Baltimore is very abundant. Upon going to central Illinois, I found the reverse of the case presented, the Orchard Oriole was present and the Baltimore absent. An observing resident informed me that he had never seen one though on a constant outlook for them, and, I may add the presence of the Baltimore is not hard to detect.

Many instances of a like character might be related. I am at loss in assigning a reason for this, as I do not think the locality can be unfavorable. Can any of the readers enlighten me?

G. POTTER,
Peru, Ind.

A Captive Screech Owl.

On the morning of Feb. 10th we captured a Screech Owl of the red type in our barn, where he had been driven by the storm. I kept him in the loft for three weeks and so had a good opportunity to study him. I found that he slept in the morning, when it was almost impossible to awake him, but was very lively in the afternoon. He seemed to prefer to eat at night. He killed two large rats either of which would certainly have outweighed him; a feat which surprised me very much. I have heard him give three distinct notes. One is like *twee-e-e-e*, *twee-e-e-e*, *ee-a*, *ee-a*. Another is *or* made entirely in the throat. His alarm note is made by snapping his beak. I have never heard him give the screeching notes in captivity. He measured as follows, wings spread, 19 in.; length, 10½ in.; tail 3 in.; ear tufts, 1½ in.

W. E. AIKEN,
Benson, Vt.

A Peculiar Nesting Site.

It was early during the collecting of the spring of 1890 that my attention was called to the peculiar nesting site of a pair of Yellow-shafted Flickers which I shall describe.

On a small hill about a quarter of a mile distant from my home stood a haystack which had been placed there two years prior to the time of which I write. The neighbor to whom the stack belonged cut it through the middle and hauled away one portion of it, leaving the other standing with one end smoothly trimmed.

Soon after the opening of the following spring when I happened to pass that way I saw a pair of Yellow-shafted Flickers about the stack, which showed signs of wanting to make that a "fixed habitation."

One bright morning a few days later when passing I was greatly amused at the efforts of one of the pair. It was clinging to the perpendicular end of the stack, and throwing out chipped straw from an excavation which it was at work on at a rate to defy competition.

The work on the excavation was continued through nearly a week. Of course it was interspersed with frequent romps and song and games of peek-a-boo around the fence posts, a very characteristic performance for Flickers which have hit on a nesting site and are progressing in its completion.

When completed the excavation was about twenty inches deep. The entrance was made eight feet or more above the ground. The burrow was two and one-half inches in diameter and was dug directly into the stack for six inches then turned directly downward and was slightly enlarged at the bottom.

The nest was composed of chips of straw. The depositing of the eggs soon followed the completion of the nest, and on the 28th of May 1890, I took

a fine set of seven eggs which are at present in my collection.

The pair lingered around and after the usual time deposited a second set which was taken June 14th.

The birds centered about the place until autumn. During that winter the portion of the stack was removed.

The Flickers returned the following spring and after a brief sojourn they left for parts unknown.

I never have been quite able to understand the philosophy of their choice of this nesting site, for woodland is abundant here. A wooded creek was less than a half mile distant while large orchards and groves abound on every hand. Was it not sheer laziness on their part?

WILL A. BRYAN,
New Sharon, Ia.

Western New York Naturalists' Association.

At the last meeting of the Association it was decided to hold the next meeting in Rochester, the third Saturday in March next, for business only.

It has occurred to me that as the more important business will before then have been cared for by the board, it might be advisable to provide for a public meeting, presentation of papers, exhibition of specimens etc., and I should be pleased to hear from each member as to what they think about it, also to receive any suggestions.

Yours sincerely
B. S. BOWDISH,

Chairman Arrangement Com.
Phelps, N. Y., 12-20-93.

A Few Hints About Climbing.

* Use, with spurs, a strong pliant, three-fourth inch rope, 6 feet long, with ends knotted. Wear buckskin gloves. Pass rope around tree. If trunk is quite uniform take a single coil of the rope about each hand, adjusting hands far enough around the trunk to

draw the body quite well up to the tree. As you rise and the trunk gets smaller, wrap more coils around one hand, or both. If there is a big crotch to pass, get good spur hold, cautiously unwind coils, hug one hand to the tree, bend back a little, draw the other hand keeping rope *taut*, around and up into the crotch. Always carry a light ten foot rope in a pocket. If a tree trunk bends toward you, part way up, make a spiral and get on the other side. In a poplar thicket of small trees climb two trees, a foot on each. P. B. PEABODY.

OBITUARY.

Death of Austin F. Park—A Scientist of Wide Attainments.

The death of Austin Ford Park occurred Sept. 25 at his residence 62 Seventh Street, Lansingburgh, N. Y. after an illness since August from typhoid fever. The deceased had been a resident of this city more than fifty years and was widely known as one of the most devoted and best informed ornithologists.

Mr. Park was the possessor of one of the finest collections of birds in the country. The collection, many specimens of which were found by himself, embraced nearly every species of bird life in North America, and even now, in its apparently perfected state, was considered by Mr. Park still unfinished, so devoted was he to his wish for a collection that would be second to none. It was not an uncommon thing for him to be seen tramping through the woods and marshes in this locality in search of new specimens. He possessed an almost infinite fund of information concerning the habits of the denizens of the air. His collection is estimated to be worth from \$8,000 to \$10,000.

[We are indebted to Mr. Harvey C. Campbell, Lansingburgh, N. Y. for the above clipping. Ed.]

The famous German ornithologist, August Karl Edward Baldamus, died at Wolffenbuttel, Germany, a short time since. He was 82 years old, and the founder of the German Ornithological society. Baldamus had one of the largest collections of birds' nests and birds' eggs in Europe. He wrote a number of books on birds.

NOVEMBER CONTEST.

Sixty-five Judges.

Prize winners and credits received by each were as follows:

1. Raptore of Michigan. 303.
2. Migration. 175.
3. Sora and Virginia Rails. 144.
4. The Game Bird of the Prairie. 141
5. Some Notes on the Wild Turkey. 102.

The following articles were each awarded a year's subscription to the OÖLOGIST.

With the Prairie Warbler. 52.

Shore Birds at Lake Roland and Loch Raven, Baltimore Co., Md. 51.

The Judges' prizes were awarded as follows:

- 1.—No. 27. Wm. C. Thro, Elmira, N. Y. *Exact.*
- 2.—No. 52. C. B. Parker, Oberlin, Kans *Exact.*
- 3.—No. 22. Cyrus R. Crosby, Crosby, N. Y. 1, 2, 4, 3, 5.
- 4.—No. 49. Raymond C. Osburn, Vanatta, O. 1, 2, 4, 3, 5.
5. No. 4. N. G. Van De Water, Gretna, N. Y. 1, 2, 3, 5, 4.

The following Judges were awarded World's Fair Almanacs:

2. Robt. McPherson, Mass.
3. L. C. Andrews, N. Y.
8. J. S. Griffing, N. Y.
9. Fred W. Parkhurst, N. Y.
10. C. Will Beebe, N. J.
16. Clareene Luther, Ark.
32. Claude H. Hall, Tex.
33. Brace & Hunter, Minn.
36. C. I. Brewer, Ills.
41. R. P. Gillispie, Miss.
51. H. M. Hall, Calif.
54. H. L. Heaton, Kans.
56. Jacob Bastian, Jr., N. C.
57. A. W. Baylis, Iowa.
59. David L. Savage, Iowa.

All prizes were mailed on Dec. 27th.

ERRATUM. In the article on "Migration" in the Nov. OÖLOGIST on page 299, fifth line from top of 2nd col., the word "delivered" should read *derived*. Mr. Chas L. Phillips, Taunton, Mass., was the writer of this valuable article.

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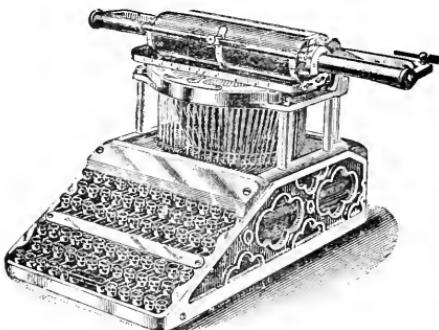
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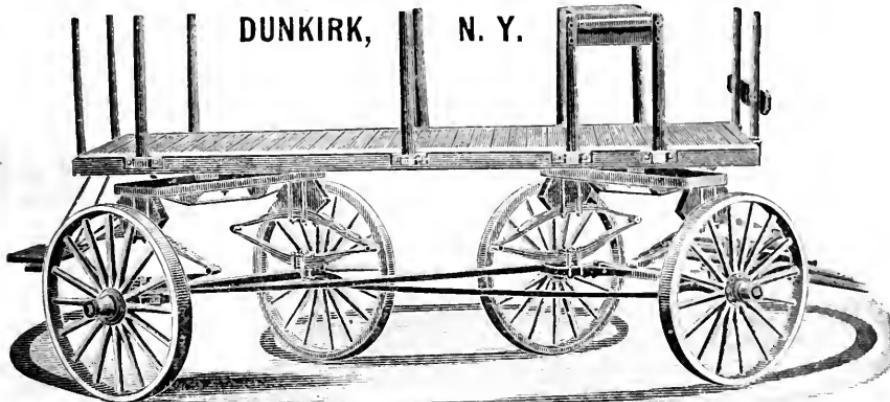
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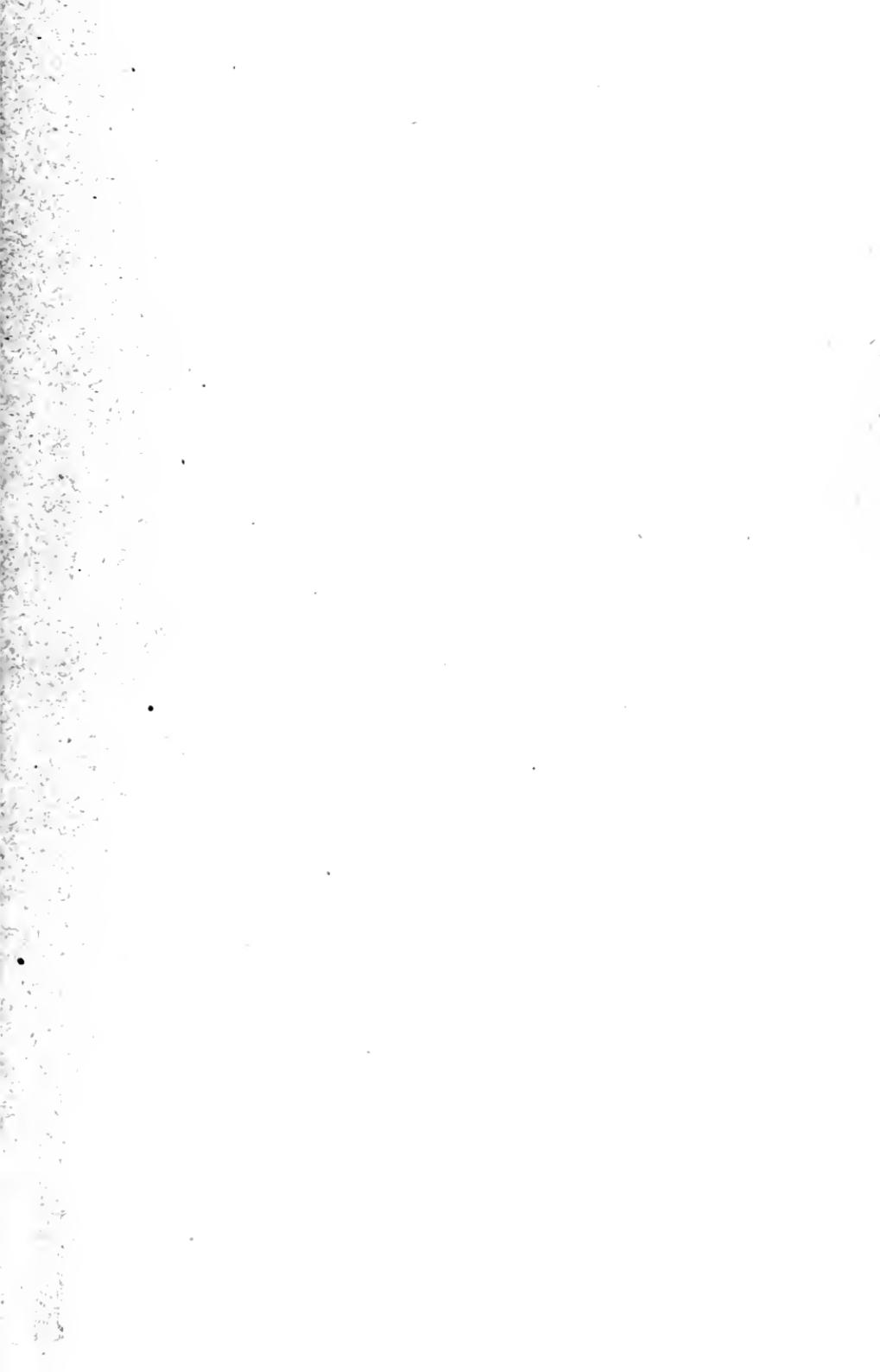
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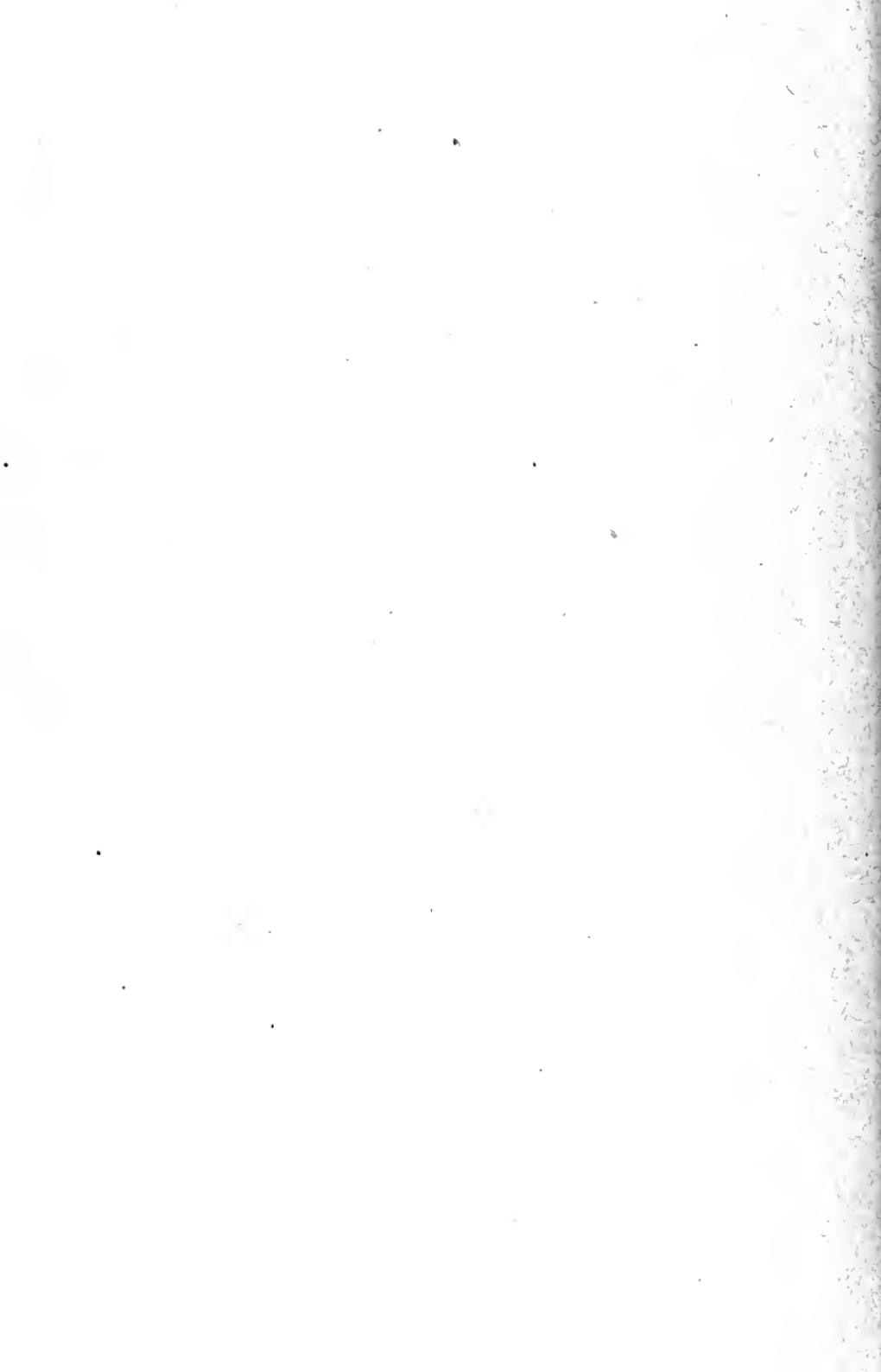
YOUR FUTURE



IS IN YOUR OWN HAND.

Palmistry assumes to tell what the lines in your hand indicate. It will amuse you, if nothing more. The above diagram almost explains itself. The length of the LINE OF LIFE indicates probable age to which you will live. Each BRACELET gives you thirty years. Well-marked LINE OF HEAD denotes brain power; clear LINE OF FORTUNE, fame or riches. Both combined mean success in life; but you must keep up with modern ideas to win it. You will find plenty of these in Demorest's Family Magazine, so attractively presented that every member of the family is entertained. It is a dozen magazines in one. A CLEAR LINE OF HEART bespeaks tenderness; a straight LINE OF FATE, peaceful life; the reverse if crooked. A well-defined LINE OF HEALTH spares you doctors' bills; so will the health hints in Demorest's. No other magazine publishes so many stories to interest the home circle. You will be subject to extremes of high spirits or despondency if you have the GIRL OF VENUS well marked; keep up your spirits by having Demorest's Magazine to read. By subscribing to it for 1894 you will receive a gallery of exquisite works of art of great value, besides the superb premium picture, 17x22 inches, "I'm a Daisy!" which is almost a real baby, and equal to the original oil painting which cost \$3.00; and you will have a magazine that cannot be equalled by any in the world for its beautiful illustrations and subject matter, that will keep you posted on all the topics of the day, and all the fads, and different items of interest about the household, besides furnishing interesting reading matter, both grave and gay, for the whole family; and while Demorest's is not a fashion magazine, its fashion pages are perfect, and you get with it, free of cost, all the patterns you wish to use during the year, and in any size you choose. Send in your subscription at once, only \$2.00, and you will really get over \$25.00 in value. Address the publisher, W. Jennings Demorest, 15 East 14th St., New York. If you are unacquainted with the Magazine, send for a specimen copy. A large QUADRANGLE means honesty; a large TRIANGLE, generosity; long FIRST DIVISION OF THUMB, strong will; LONG SECOND DIVISION, reasoning faculty. The MOUNT OF JUPITER betokens ambition; that of SATURN, prudence; the SUN, love of splendor; MARS, courage; MOON, imagination; VENUS, love of pleasure; and MERCURY, intelligence. Take our advice as above and you will be sure to possess the last and most valuable quality.







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